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Practical guidelines for development of a university-wide faculty mentorship program using a multimodal mentoring network model

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Abstract

Formal faculty mentorship programs are a practical and effective pathway to enable faculty success in teaching, scholarship, and service and to enhance faculty satisfaction. Although informal mentoring relationships benefit some faculty, formal faculty mentorship programs ensure equitable access to mentorship for female faculty and faculty from diverse, underrepresented backgrounds. Formal faculty mentorship programs can utilize a variety of structures, each with their benefits and drawbacks. This article recommends a multimodal mentoring network model to harness the benefits of traditional dyadic mentoring, multiple-mentor mentorship, peer and near-peer mentorship, and topic- and affinity-based group mentorship and to confer the flexibility, adaptability, and support needed to best cater to the career and psychosocial needs of a diverse faculty. In addition to identifying a suitable program structure, creating a successful university-wide faculty mentorship program requires consultation with faculty of all levels, collaboration with multiple campus departments and stakeholders, and highly visible support from senior administrators. Successful implementation and maintenance of a multimodal university-wide faculty mentorship

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program also requires appropriate resources and incentives to build and sustain a culture of faculty participation. This article provides practical, evidence-based recommendations for the successful design and implementation of a multimodal university-wide faculty mentorship program.

Keywords: faculty mentorship program, multimodal mentoring networks, group mentorship, peer and near-peer mentorship, multiple-mentor mentorship, dyadic mentorship

Faculty mentorship is a practical, adaptable, and highly effective strategy for supporting faculty members' success and satisfaction across their career. Formal faculty mentorship programs have been shown to enhance teaching effectiveness (Harris, 2009; Hendricson et al., 2007; Shannon et al., 1998; Steinert et al., 2006, 2016; Williams, 1991) and to increase research productivity (Bland et al., 2002; Byrne & Keefe, 2002; Jackevicius et al., 2014; Muschallik & Pull, 2016; Paul et al., 2002; Pfund et al., 2016) for faculty mentees across disciplines. In addition to increasing faculty effectiveness and productivity, faculty mentorship programs increase faculty recruitment, retention, and satisfaction and decrease rates of faculty attrition (Bauman et al., 2014; Bean et al., 2014; Bucklin et al., 2014; Chandran et al., 2017; Chen et al., 2016; Chung & Kowalski, 2012; Cora-Bramble, 2006; Dunham-Taylor et al., 2008; Falzarano & Zipp, 2012; Farkas et al., 2019; Heinrich & Oberleitner, 2012; Hessler & Ritchie, 2006; Jeffers & Mariani, 2017; McRae & Zimmerman, 2019; Smith & Zsohar, 2007; Steele et al., 2013; Thompson, 2008; Voytko et al., 2018; Walensky et al., 2018) by providing both career and psychosocial support. Although both formal and informal faculty mentoring relationships can have positive impacts on faculty outcomes (Bynum, 2015; Desimone et al., 2014; Du & Wang, 2017; Guzman Johannessen & Unterreiner, 2010; Inzer & Crawford, 2005; Ragins & Cotton, 1999), formalized mentoring programs have a greater impact on women and diverse faculty who are often less likely to form spontaneous informal dyadic mentoring relationships (Bauman et al., 2014; Bickel, 2014; Chang et al., 2014;

Chesler & Chesler, 2002; Chesler et al., 2003; Cora-Bramble, 2006; Cropsey et al., 2008; Driscoll et al., 2009; Evans & Cokley, 2008; Farkas et al., 2019; Ghosh et al., 2020; Hansman, 2002; Jacelon et al., 2003; Pololi & Knight, 2005; Santos & Reigadas, 2002; Thompson, 2008; Varkey et al., 2012; Voytko et al., 2018; Zellers et al., 2008). At some colleges and universities, the size of small or isolated departments can also limit the availability of informal mentorship opportunities. A comprehensive faculty mentorship program can promote a more inclusive and supportive scholarly community, cultivate a more positive organizational climate, and help to foster a culture that supports faculty success (Falzarano & Zipp, 2012; Fountain & Newcomer, 2016; Zellers et al., 2008). A university-wide multimodal mentoring network model for a comprehensive faculty mentorship program, designed using research-based best practices in the field of faculty mentorship, can help any college or university establish and maintain a positive culture of faculty excellence (Fountain & Newcomer, 2016; Huizing, 2012; Lumpkin, 2011; Office of the Provost, 2016; Sorcinelli & Yun, 2007; Zellers et al., 2008). This article proposes a theoretical framework for a multimodal mentoring network model for a comprehensive university-wide faculty mentorship program that harnesses the benefits of multiple traditional mentorship models and caters to the needs of a diverse faculty. It provides practical, evidence-based recommendations for educational developers, and others tasked with supporting faculty, to either implement a new university-wide faculty mentorship program or to overhaul an existing one that is not fully meeting its objectives.

Mentoring Program Models

A multimodal mentoring network model for a university-wide faculty mentorship program combines features of traditional dyadic mentorship, multiple-mentor mentorship, peer/near-peer mentorship, and topic/affinity group mentorship to harness their respective benefits and minimize their drawbacks. A multimodal mentoring network model minimizes the

burden on senior faculty; encourages junior, midlevel, and senior faculty to draw support from a diverse set of mentors, groups, and resources; decreases mentee reliance on a single mentoring relationship; and harnesses the technological savvy and innovative strategies and techniques that may be more familiar to junior rather than senior faculty (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018; Office of the Provost, 2016; Zellers et al., 2008).

Traditional Dyadic Mentor-Mentee Pairings

In its most traditional and common form, mentorship has followed an apprenticeship-based hierarchical model in which a more senior faculty mentor advises a more junior faculty mentee to help them reach a pre-specified career goal. These relationships include regular check-ins to monitor progress toward a specific goal such as reaching promotion and tenure milestones, designing courses, learning teaching techniques, developing a research program, or applying for a grant. These dyads can be chosen or assigned. Pairings with some element of choice tend to be more sustained and successful, but extreme care must be taken to ensure that women and minority faculty have equitable access to excellent mentors (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018; Office of the Provost, 2016; Zellers et al., 2008). It is important for mentees to have input in the mentor selection process because mentees' career goals and developmental agendas will define their relationship with their mentor (Allen et al., 2006). Oftentimes a committee will establish a pool of senior candidate mentors from which mentees select their mentors; this approach provides mentees with input into the mentor selection process and creates safeguards to ensure mentor quality (Zellers et al., 2008). These types of dyadic relationships place additional burdens on senior faculty, and time and scheduling challenges can be a major concern (Bean et al., 2014; Office of the Provost, 2016). In all cases, pairings should be avoided if a prospective mentor has supervisory authority over a mentee, and cross-departmental (or intercollegiate) rather than

intradepartmental pairings are preferred as they are less political due to the nature of promotion and tenure decisions (Boyle & Boice, 1998; Zellers et al., 2008). A three-year study of 51 faculty mentor-mentee dyads in a formal faculty mentorship program at Western University of Health Sciences' College of Pharmacy found that large majorities of mentors and mentees were satisfied with the program and identified a statistically significant increase in peer-reviewed publications by junior faculty following implementation of the program (Jackevicius et al., 2014). The same program, however, did not identify improvements in faculty retention rates, greater success in promotion or tenure decisions, or an increase in the number of grants submitted—suggesting other mentoring models might be more effective (Jackevicius et al., 2014).

Multiple-Mentor Mentorship/Non-Dyadic Mentorship

Many studies on best practices in faculty mentorship demonstrate that mentorship can be thought of more broadly than a singular dyadic relationship (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018; Zellers et al., 2008). After all, no single mentor can offer all the types of knowledge, skills, abilities, connections, and support that a mentee requires (Montgomery, 2017; Montgomery and Page, 2018; Yun et al., 2016). Effective mentorship provides both career support such as skill development, networking, sponsorship, and promotion and tenure guidance, as well as psychosocial support such as emotional support, confidence boosting, and role modeling work-life balance (Haggard et al., 2011). In addition, the needs, goals, and interests of mentees change dynamically in accordance with their personal and professional development. Furthermore, as new faculty develop additional competencies and skills, non-dyadic models allow more junior faculty to act as mentors for others in addition to their roles as mentees (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018). The most important feature of mentorship seems to be accessibility, and faculty members that achieve the highest levels of objective career success are

those that have access to different sources of mentors and mentorship as needed across career stages (Cawyer et al., 2002; National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery, 2017; Montgomery and Page, 2018; Peluchette & Jeanquart, 2000). Multiple-mentor mentorship models confer the benefits of dyadic mentorship models but also allow mentees the flexibility and accessibility to seek out support for their changing career needs. These mentoring relationships can be variable in duration, scope, and nature of support, and relationships can be established with multiple mentors (Office of the Provost, 2016). An 18-year analysis of 192 junior faculty mentees in the Teaching Scholars Program at Miami University in Oxford, Ohio, found that although mentees were only permitted a single mentor for the first seven years of the program, over the course of the subsequent 11 years, over 40% of mentees chose multiple faculty mentors—demonstrating a preference for access to more than a single mentor (Cox, 1997). Under a multiple-mentor model, a database of knowledge and skills, based on an assessment of mentor expertise and availability and mentee needs, could be established and maintained to provide faculty access to highly specific mentoring networks and resources (Center for Faculty Development and Excellence, 2019; Center for Faculty Excellence, n.d.; National Academies of Sciences, Engineering, and Medicine, 2019). At Emory University, for example, the Center for Faculty Development and Excellence hosts a Faculty Mentorship Network of over 180 volunteer faculty to facilitate support for faculty mentees of all career stages by connecting them with multiple mentors on multiple topics as needed (Center for Faculty Development and Excellence, 2019).

Peer and Near-Peer Mentorship

Peer and near-peer mentorship are forms of small-group nonhierarchical mentorship in which individuals at the same or nearly same career stages act simultaneously as both mentors and mentees. The nonhierarchical power dynamic of peer and near-peer mentorship maximizes reciprocal information sharing and psychosocial support

(Office of the Provost, 2016). Peer and near-peer mentorship also helps to build community by engendering empathy through shared experiences (Chesler et al., 2003; Zellers et al., 2008). Peer and near-peer mentorship are effective for all faculty but seem to be especially impactful for women and minority faculty by building a supportive and caring community, promoting personal and professional growth, and stimulating collaborative scholarship (Chesler & Chesler, 2002; Chesler et al., 2003; Driscoll et al., 2009; Heinrich & Oberleitner, 2012; Jacelon et al., 2003; Kalpazidou Schmidt & Faber, 2016; Varkey et al., 2012; Yun et al., 2016). Compared to traditional dyadic mentoring, peer and near-peer mentoring better meets the needs of historically marginalized faculty and can be a stimulus for facilitating positive institutional cultural change (Thomas et al., 2015). Although dyadic mentorship is designed to meet the career objectives of junior faculty, peer and near-peer mentorship are not limited to junior faculty and can help to facilitate dialogue among midlevel and senior faculty who face career transitions and to help them adapt to technological innovation, novel teaching tools, and modern research methods (Office of the Provost, 2016). Peer and near-peer mentorship is a useful model for faculty at all career levels, including early, midlevel, and senior tenure-track, non-tenure-track, and adjunct faculty and can be a powerful tool for promoting career equity through increased recruitment, retention, and satisfaction among historically underrepresented faculty populations (Thomas et al., 2015).

An autoethnographic study of five pre-tenure female faculty at Virginia Polytechnique Institute and State University found that through peer mentoring they were able to motivate one another and promote scholarly accountability by transforming themselves from professionally isolated individuals to a collaborative group of writers with a better understanding of themselves as scholars, the role of peers in their development as scholars, and their roles in their broader academic environment (Driscoll et al., 2009). Similarly, a three-year study of tenured women STEM faculty participants in Peer Mentoring Circles at the Ohio State University found that during each year of the program,

over 78% of the participants reported personally benefiting from the program, over 50% of participants reported professionally benefiting from the program, and over 75% reported that participation was a valuable use of their time. Forty-two faculty participated in the first year of the program, 31 faculty in the second year, and 22 faculty in the final year of the program. The Peer Mentoring Circles also opened up opportunities to engage with university administrators to address problems raised in the circles and to create lasting institutional change (Thomas et al., 2015).

The main drawback of peer mentorship is that participants are limited by the depth and breadth of their experience, but near-peer mentorship circumvents this limitation by having a colleague who is one step ahead in their career experience provide facilitation (Zellers et al., 2008). A study of 19 junior female faculty in the Department of Medicine at the Mayo Clinic found that after a year of monthly peer/near-peer mentoring with a facilitator, participants submitted nine manuscripts and reported significant increases in satisfaction with scholarly achievement, ability to effectively search the medical literature, ability to write a literature review, and ability to critically evaluate the medical literature (Varkey et al., 2012). Similarly, a three-day adventure-based peer/near-peer retreat for 14 female pre-tenure faculty from institutions across New England and an invited senior female dean of engineering found substantial informational and psychosocial benefits for participants and a renewed commitment to helping and encouraging others at their home institutions (Chesler et al., 2003).

Topic/Affinity Mentorship Groups

Topic-based mentorship groups can utilize either a hierarchical or non-hierarchical mentorship model in which one mentor or a small number of mentors of any career level provide specific training, typically in a time-limited format such as a seminar, workshop, series, or community-of-practice (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018; Office of the Provost, 2016;

Wenger et al., 2002). Topic-based mentorship groups are composed of multiple mentors and multiple mentees, and mentees typically serve as mentors for one another as well. Topic-based mentorship groups facilitate collective development on a topic of interest for members across disciplines and levels of expertise (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018). Topic-based mentorship groups can include one-off faculty development programs, annual events, themed seminar series, course-based workshops and course design institutes, and semester-long themed communities of practice. Group mentorship offerings can include teaching, research, scholarship, and career topic areas, based on faculty needs, and has been shown to enhance faculty development, retention, and satisfaction; group mentorship also helps to expand the reach of faculty development programming by catering directly to interested faculty groups (Driscoll et al., 2009; Heinrich & Oberleitner, 2012; Huizing, 2012; Pololi & Knight, 2005). Perhaps the most well-documented and impactful form of topic-based group mentorship is the formation of themed communities of practice that meet on specific topics across several sessions for a defined period of time (Abigail, 2016; Gehrke & Kezar, 2017; Hoyert & O'Dell, 2019; Wenger et al., 2002). A two-year study at Indiana University of 46 faculty participating in communities of practice, formed based on shared pedagogical interests, found that participating faculty had introduced 12 different teaching techniques into 15 classes and that over 2,000 students had participated in redesigned courses. When comparing student outcomes in the redesigned courses to the same courses prior to the redesign, the authors found statistically significant increases in course GPA and the one-year retention rate and found a statistically significant decrease in the percentage of students receiving a D, F, or withdrawal in the courses (Hoyert & O'Dell, 2019).

In addition to topic-based mentorship groups, mentorship groups can be affinity-based to support faculty members who share minoritized identities among academic faculty (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery and Page, 2018). Affinity-based mentorship groups can help foster critical communities

of support for faculty who experience oppression, unconscious bias, isolation, and/or invisibility as a result of their identities (Chang et al., 2014; Comer et al., 2017; Cora-Bramble, 2006; Martinez et al., 2015; Montgomery et al, 2014; Montgomery and Page, 2018; Thompson, 2008; Yun et al., 2016). Affinity-based mentorship groups can also help to support faculty facing similar career and psychosocial challenges, such as faculty with young children or faculty transitioning to retirement. A series of reflective *testimonios* (testimonial narratives) from five female faculty of color at different institutions, who met while working on their PhDs at the University of Texas at Austin, details their lived experiences as part of a three-year long research and writing collective. They describe their affinity-based peer mentoring group as a space of unconditional acceptance and support and a refuge from academic despair and the various forms of racism, sexism, and classism that they experience in the academy. Through their reflections, they share their model to help guide and encourage other female faculty and faculty of color to develop their own research and writing collectives (Martinez et al., 2015). Similarly, a group of four tenured female faculty of color at the University of Connecticut, a predominantly white institution, describe creating their own circle of support to face the challenges of marginalization, inequality, isolation, and work-life balance together and to validate their individual and collective professional worth (Comer et al., 2017).

Multimodal Mentoring Network Model

Overall, a multimodal mentoring network model harnesses the benefits of traditional dyadic mentoring, multiple-mentor mentorship, peer and near-peer mentorship, and topic- and affinity-based group mentorship. A multimodal mentoring network model confers the flexibility, adaptability, and support to best cater to the career and psychosocial needs of a diverse faculty (National Academies of Sciences, Engineering, and Medicine, 2019; Montgomery, 2017; Montgomery and Page, 2018; Office of the Provost, 2016; Zellers et al., 2008). In such a model

(Figure 1), an individual faculty member could maintain a long-term dyadic mentoring relationship with a proven experienced faculty member and could seek out multiple other mentors for short-term support either informally or through a maintained database. The same faculty member might also participate in a peer or near-peer mentoring group to build community through shared experiences with other faculty of a similar age and rank, receive psychosocial support from an affinity-based mentoring group of faculty with similar underrepresented identities who might be facing similar challenges, and could learn together

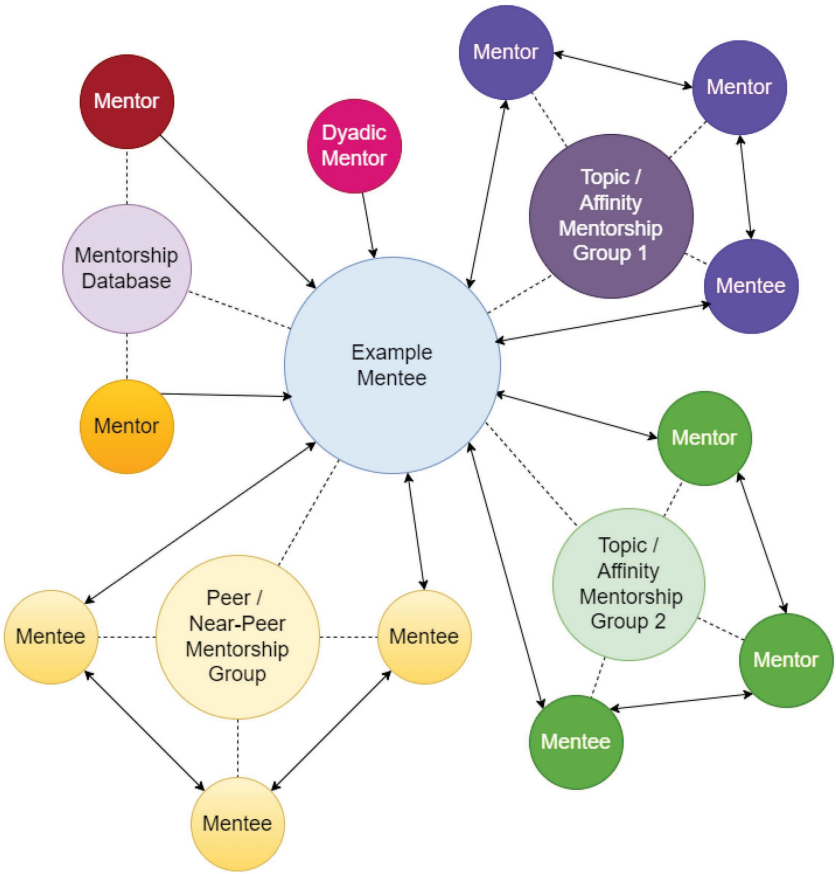

Figure 1. Theoretical Framework of a Multimodal Mentoring Network for an Example Mentee

across disciplines and levels of expertise along with one or more topic-based mentorship groups of faculty with similar interests or goals.

Such a model lessens the mentorship burden on senior faculty, offers pathways to learn from a diverse set of mentors with different expertise as needed, provides support to faculty of all career levels and teaching modalities, and gives more junior faculty opportunities to serve not only as mentees but also as mentors. The success of the Mutual Mentoring program at the University of Massachusetts Amherst provides a compelling example for the benefits of a flexible, relational, network-based mentoring structure, like a multimodal mentoring network model, for meeting the needs of a diverse faculty. Across eight years of the Mutual Mentoring program, the university awarded 142 grants to mentoring networks of various sizes, 518 faculty participated in the program, women and faculty of color were overrepresented in the initiative, and participating faculty were more likely than their nonparticipating peers to view mentoring as a career-enhancing activity (Yun et al., 2016).

A multimodal mentoring network, however, differs from the Mutual Mentoring program in several key aspects. The Mutual Mentoring program was supported by several large grants from the Andrew W. Mellon Foundation, whereas a multimodal mentoring network model could be established and maintained in a more resource-scarce environment. The Mutual Mentoring program maximizes faculty agency by providing internal grants to faculty to design their own pockets of mentorship in whatever format, size, and modality they desire; this process requires considerable funding and leverages a variety of mentoring modalities across a university but does not necessarily provide access to multiple mentoring opportunities and modalities for a single mentee. Multimodal mentoring networks facilitate multiple opportunities and modalities of mentoring for individual mentees through a more top-down approach supported by educational developers. This model still gives faculty a sense of agency through the needs assessment process, highlights access to multiple modalities of mentorship through a network-based structure, and can be established in a resource-scare environment.

Mentorship Program Implementation

Establishing and maintaining a comprehensive and effective university-wide multimodal faculty mentorship program requires cooperation and support from many campus offices, departments, and stakeholders, including centers for teaching and learning, the Office of the President, the Office of the Provost, academic deans, faculty governing bodies, faculty committees, department chairs and program directors, and the faculty as a whole. Such a large university-wide initiative may also require outside financial assistance and the support of the office of sponsored programs. The following key steps (Lumpkin, 2011; Mondisa et al., 2021; Office of the Provost, 2016) are required to create a mentorship program that enhances faculty recruitment, retention, satisfaction, effectiveness, and productivity.

Consultation With Junior, Midlevel, and Senior Faculty

Building a sustainable faculty mentorship program that provides both career and psychosocial support requires that such a program meet the diverse needs of junior, midlevel, and senior tenure-track, non-tenure-track, practice-track, and adjunct faculty. Program administrators should assess faculty needs (Table 1) to ensure that mentorship offerings are designed to address those needs. A faculty needs assessment should collect some information regarding faculty rank, experience, discipline, teaching modality, and social identities to ensure that diverse faculty needs are being met and to guarantee that the program structure specifically addresses the needs of minoritized faculty. With input from faculty, program administrators should create a database of faculty mentorship skills to successfully connect mentors and mentees. Program administrators will need to establish guidelines regarding the qualities of effective mentors and responsible mentees and will need to facilitate mentor and mentee training to ensure the formation of effective mentoring relationships. Program administrators should also establish a faculty committee to identify excellent, experienced faculty

Table 1. Sample Needs Assessment Questions for Identifying a Program Structure

Please indicate your degree of interest in participating in faculty mentoring to accomplish each of the following: (Scale: 1–5, *not at all interested* to *extremely interested*)
- Support your career goals
- Build additional career-focused skills
- Receive psychosocial support from colleagues

Please indicate your degree of interest in each of the following types of mentoring: (Scale: 1–5, *not at all interested* to *extremely interested*)
- Establishing and maintaining a relationship with a more senior faculty member to help you reach your long-term career goals
- A faculty mentorship database where you could find faculty with teaching and research expertise relevant to you, so that you could establish short-term mentoring relationships to reach immediate career goals as needed
- A nonhierarchical peer mentoring group where you could meet with other faculty of a similar career stage to provide one another with career and psychosocial support for your shared challenges and engender empathy through shared experiences
- An affinity-based mentoring group of faculty of multiple career stages with shared underrepresented identities to foster critical communities of support for faculty who experience oppression, unconscious bias, isolation, and/or invisibility (e.g., faculty of color, faculty with young children, LGBTQ+ faculty)
- A topic-based mentoring group to facilitate collective development on a topic of interest across disciplines and levels of expertise and to work together toward a common goal

Please indicate how incentives would factor into your degree of interest in additional faculty mentoring activities: (Scale: 1–5, *not an important incentive* to *extremely important incentive*)
- Financial incentives/extra compensation
- Changes to the workload structure to reassign time for mentoring activities
- Acknowledgment of mentoring contributions or participation in the annual review/promotion and tenure processes

who can serve as dyadic mentors. Since mentorship activities can represent a significant time commitment and effort, program administrators should create clear expectations for both mentors and mentees.

Identification of a Program Structure

A sustainable university-wide faculty mentorship program should be built on the research-based best practices in faculty mentorship examined in this article and should meet the career and psychosocial needs of faculty after conducting a needs assessment (Table 1). The sample needs assessment questions in Table 1 were used to identify a program structure for a new university-wide faculty mentorship program

at Simmons University, a small, private, primarily undergraduate institution and could be used at other colleges and universities to identify a program structure. A baseline needs assessment of 464 junior faculty at the University of California, San Francisco similarly helped to identify faculty mentorship needs prior to implementing a comprehensive faculty mentorship program but focused more on topics in which junior faculty were seeking assistance and not on how the faculty mentorship program would be structured (Feldman et al., 2010). Once a needs assessment is conducted, a multimodal mentorship network model can be designed and established in which the multiple modalities and formats of mentoring described throughout this article can be implemented to meet the diverse career and psychosocial needs of the faculty. Some examples may include peer and near-peer mentoring for psychosocial support, promotion and tenure guidance, and career transitions; group mentoring seminars, workshops, and communities of practice for both affinity groups and for acquiring and developing skills such as teaching for inclusive excellence, grant and manuscript writing, active learning, reflective practice, course design, and various research techniques and approaches; dyadic mentoring for career counseling, networking, and sponsorship; and multiple-mentor mentorship for urgent, time-limited inquiries for diverse types of career-based, skill-focused, and psychosocial support. Ongoing assessment and evaluation of the program will be required to ensure continuous improvement such that it is meeting the changing needs of a diverse faculty.

Resources and Incentives

A university-wide faculty mentorship program designed to utilize best practices in faculty mentorship will only be successful if the appropriate resources and incentives are dedicated to the program. Appropriate staffing is required to assess faculty needs, oversee the detailed design of the program structure, create and maintain a faculty mentorship database, establish guidelines for effective mentors and responsible mentees, develop and provide mentor and mentee training, and evaluate program

success to ensure continuous improvement. Significant resources in the form of faculty time for both mentors and mentees must be committed to mentorship activities and may require course releases or modifications to faculty workload structures. A sustainable culture of mentorship will also require significant incentives for faculty participation. These incentives could include making mentorship an integral part of the annual evaluation process and promotion and tenure processes, modifications to the faculty workload structure, and/or financial incentives for demonstrated excellence in mentorship participation. Lastly, awards should be established and given to excellent mentors in recognition and celebration of the value and significance of demonstrated excellence and successes in mentorship. Highly visible support from senior administration and significant incentives for faculty participation are integral for program success.

Challenges and Considerations

Educational developers looking to establish or expand a university-wide faculty mentorship program are likely to face significant challenges to implementation. In the resource-constrained environments of most colleges and universities, financial incentives for participation, changes to the faculty workload structure, and additional staffing may be significant barriers or may be cost prohibitive. A faculty needs assessment (Table 1) that surveys how incentives would factor into faculty participation can help to prioritize where to allocate resources and can be used to persuade senior administrators of the necessity of appropriate resourcing. When proposing a university-wide faculty mentorship program to senior administration, it is important to lean into the evidence of the benefits of such an initiative. Increased retention and satisfaction among participating faculty will provide cost savings related to faculty recruitment and training and may reduce the need for other resource-intensive programs aimed to improve faculty satisfaction. Increased retention and satisfaction of underrepresented faculty will lead to a more diverse, inclusive, equitable, and just academic environment for both faculty and students. Increased scholarly productivity may attract

more external funding for faculty at the university, and improved teaching effectiveness will impact student learning and produce cost savings by attracting more students and by improving student retention. Although program implementation requires significant resources, an effective faculty mentorship program will result in significant benefits and may even produce cost savings. External funding agencies are also eager to support comprehensive, evidence-based faculty mentorship programs because of all the benefits described throughout this article. The eight-year Mutual Mentoring program at University of Massachusetts Amherst, for example, was possible due to three external grants from the Andrew M. Mellon Foundation that helped to establish and support the program (Yun et al., 2016).

Conclusion

Formal faculty mentorship programs are a highly effective, well-documented strategy to improve faculty effectiveness, productivity, and satisfaction by providing both career and psychosocial support. Overall, a multimodal mentoring network model harnesses the benefits of traditional dyadic mentoring, multiple-mentor mentorship, peer and near-peer mentorship, and topic- and affinity-based group mentorship while minimizing the deficiencies of each model. A multimodal mentoring network model minimizes the burden on senior faculty and decreases mentee reliance on a single mentoring relationship while still providing mentees with access to excellent mentorship and opportunities for sponsorship. By encouraging faculty of all levels to draw support from a diverse set of mentors, groups, and resources, this model encourages more senior faculty to continuously seek out professional development and provides junior faculty with opportunities to act as mentors by leveraging their innovative approaches and technological savvy. Compared to traditional dyadic mentoring, multiple-mentor mentorship, peer and near-peer mentorship, and topic- and affinity-based group mentorship, the flexibility of a multimodal mentoring network model can better support the diverse and changing needs of faculty

members. Flexible, network-based models are particularly beneficial for female faculty and underrepresented faculty, who are often not appropriately supported by more traditional mentorship models (Bauman et al., 2014; Comer et al., 2017; Driscoll et al., 2009; Martinez et al., 2015; Montgomery, 2017; Montgomery and Page, 2018; National Academies of Sciences, Engineering, and Medicine, 2019; Thomas et al., 2015; Yun et al., 2016). Whereas dyadic mentorship, multiple-mentor mentorship using a database, and topic-based group mentorship primarily support mentee career goals and the acquisition of specific faculty skills, peer and near-peer mentorship and affinity-based group mentorship primarily cater to the psychosocial needs of faculty. The adaptability of combining these approaches will better meet the needs of faculty of all identities, career stages, and employment streams and provides more equitable access to mentorship. When combined with the appropriate resources and support, a multimodal mentoring network model has the power to cultivate a more positive organizational climate and to help foster a culture that supports faculty satisfaction and success.

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Biography

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