FACULTY DEVELOPMENT

A Checklist for the Development of Faculty Mentorship Programs

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Submitted January 13, 2014; accepted March 11, 2014; published June 17, 2014.

Mentoring of junior faculty members continues to be a widespread need in academic pharmacy in both new programs and established schools. The American Association of Colleges of Pharmacy (AACP) Joint Council Task Force on Mentoring was charged with gathering information from member colleges and schools and from the literature to determine best practices that could be shared with the academy. The task force summarized their findings regarding the needs and responsibilities for mentors and protégés at all faculty levels; what mentoring pieces are in existence, which need improvement, and which need to be created; and how effective mentoring is defined and could be measured. Based on these findings, the task force developed several recommendations as well as the PAIRS Faculty Mentorship Checklist. Academic institutions can benefit from the checklist whether they are planning to implement a faculty mentorship program or are interested in modifying existing programs.

Keywords: mentor, faculty development

INTRODUCTION

Formal mentoring has been associated with improved faculty job satisfaction, increased commitment, reductions in faculty turnover, greater productivity, and a favorable “departmental ethos.” Alternatively, lack of mentoring has been associated with faculty isolation, stress, burnout, and turnover. Traditionally, mentoring has been focused at the junior faculty level where orientation to academic life, career planning, and promotion are vital elements. However, the need for mentoring has been identified at every step of an academic career, including for midlevel faculty members who are looking to expand their portfolios and be promoted to professor; and senior faculty members who may want to transition to academic administration or rejuvenate their research profiles. There is also an identified need for mentoring based on category of profile (teaching/scholarship/clinical service). Hence, there is a definite need for a plan to incorporate these different types and levels of mentoring.

The AACP Joint Councils Task Force on Mentoring (2012-2013) was charged to determine: (1) the needs and responsibilities for mentors and protégés at all faculty levels; (2) what mentoring pieces are in existence, need

*Authors were members of the AACP Joint Councils Task Force on Mentoring 2012-2013. Dr. Law served as Chair.
improvement, or need to be created; and (3) how effective mentoring is defined and could be measured. Given the diversity of mentoring programs and levels previously identified, a template for mentoring programs was needed. This template evolved into a checklist for faculty mentoring in academic pharmacy programs. A “cookie cutter” approach to mentorship would not work in most cases as all mentors and protégés are not the same in their goals and approach. Thus, this checklist is intended to serve as a resource to pharmacy colleges and schools that are considering a faculty mentorship program, as well as those who are interested in implementing a faculty mentorship program and would like some resources, and those who would like to modify an existing program. The proposed checklist would need to be easily modifiable for different types and levels of mentoring. The primary objectives of this paper are to present recommendations based on findings from a comprehensive literature review and to describe the development of a checklist that can be used to establish, implement, or modify academic pharmacy mentoring programs.

LITERATURE REVIEW

Following a conference call to plan a strategy for addressing the charges, 2-person teams of task force members conducted independent literature reviews within and outside of the pharmacy literature using PubMed and ERIC databases to research the following: (1) definition and areas of mentorship, (2) formal vs informal mentorship, (3) internal vs external mentors and multiple mentors, (4) resources needed for mentoring programs, (5) stages of mentoring, (6) criteria for assessment of mentoring programs, and (7) best practices in existence of mentoring programs. Keywords used for the searches included: academic mentoring, mentoring mentorship, mentoring programs, and outside of the pharmacy literature using PubMed and ERIC databases to research the following: (1) definition and areas of mentorship, (2) formal vs informal mentorship, (3) internal vs external mentors and multiple mentors, (4) resources needed for mentoring programs, (5) stages of mentoring, (6) criteria for assessment of mentoring programs, and (7) best practices in existence of mentoring programs. Keywords used for the searches included: academic mentoring, mentoring mentorship, mentoring programs, efficacy, evaluation, assessment, tool, scale, measure, success, resource, and best practices.

Each task force team then wrote a narrative on their assigned area. The narratives were subsequently reviewed by the entire task force for content, readability, and redundancy. A summary of the narrative in each reviewed category is presented, followed by a recommendation. Based on their findings from the comprehensive literature review, the task force developed a checklist that outlined the 5 steps for developing a mentorship program in the order in which they typically are considered, ie, intent, structure, process, resources, assessment and evaluation (Appendix 1). The 5 steps should not be considered in isolation but rather all 5 are interrelated and should inform the design of the program. To help users remember these 5 steps, the authors used the first letter of each step to form the acronym PAIRS, ie, Process, Assessment and evaluation, Intent, Resources, Structure.

FINDINGS

Definition and Areas of Mentorship

The literature defines different academic areas focusing on the role and functions of mentors differently. Most of these mentorship roles contained the same basic elements. A mentor is someone who is usually a colleague in the same work environment and who is more advanced in the workforce. In an academic setting, a mentor aids the protégé in setting and prioritizing his/her short-term and long-term career goals, and helps with time management.4,6 The mentor also serves as a cheerleader, championing the fulfillment of goals, and believing firmly in the abilities and worth of the protégé.5,6 This includes being an advocate for the protégé in the workplace, protecting the protégé against adverse situations (eg, too much service), helping the protégé learn the skills of networking, and introducing the protégé to senior scientists in their area of expertise.5−7

The role of a mentor is different than that of a coach or a friend. A coach helps someone practice and/or role-play in order to achieve a particular task, job, etc. A friend, in contrast, is someone who relates on a personal level and can overlook or not comment on faults, problems, and deficiencies.9

In the areas of research, the mentor can help the protégé develop grant-writing skills and attain funding.4,5,7,10,11 In teaching, the mentor can help the protégé outline, organize, and deliver lecture/laboratory/clinical content. The mentor can listen, critique, and give positive reinforcement in these scholarly efforts.9,11 In clinical settings, the mentor can be important in networking and introducing the protégé to others.12 The mentor can help the protégé with setting up a practice, teaching (precepting), and setting goals for teaching, practice, and evaluation in clinical areas. The mentor also can collaborate with the protégé in the clinic.13

An overarching or career mentor can help in all areas by serving as a guide and resource; he/she may not be able to perform specific functions, but can serve as a resource or redirect protégés to other individuals who can directly help, or who know how the protégé should approach others. The mentor can set a good example by showing how to achieve a good personal/professional life balance. The goal should be to “work smarter, not longer.”5,7 The mentor should be a confidant of the protégé, allowing the protégé to honestly express positive and negative feelings and helping the protégé learn to express his/her thoughts and opinions, and deal with disappointments.5−7 The mentor should listen and offer advice, but
always encourage and champion the younger protégé. The ultimate goal of the mentor is for the protégé to become successful and self-sufficient in the workplace, with appropriate recognition for scholarly activities, promotion (ultimately to full-professor), achieving a national and international reputation for good work, and ultimately, for the protégé to pass on the mentor’s “legacy” by mentoring others in turn.\(^{6,7,10}\)

**Recommendation 1.** The mentor role should be defined and discussed with the protégé at the initiation of the program to set expectations.

**Formal Versus Informal Mentorship**

There is some discussion in the literature about whether informal or formal mentorship is more beneficial. Only about a quarter of universities in the United States have formal mentorship programs, although the predominant belief is that having a formal mentorship program is vital.\(^4\) According to Pololi and Knight, “Informal mentoring occurs serendipitously when 2 individuals are drawn together by mutual interests and appeal, resulting in a kind of ‘spontaneous or accidental mentoring [that] almost always works.’\(^{11}\) Thus, it is advisable for new faculty members to meet briefly with all other faculty members in their department to see who might be a natural fit as a mentor for them.\(^{12}\) Often informal mentorship is more fruitful because the relationship is established in a more spontaneous and organic way, often developing over time. However, that means an informal mentorship requires more time initially to form a relationship/bond. In addition, some new faculty members may be uncomfortable with an informal mentoring arrangement.\(^{13}\)

Formal mentorship, on the other hand, is “planned, often institutionally supported or mandated, and is somewhat reminiscent of a ‘blind date’ or ‘arranged marriage.’”\(^{12}\) It involves the assignment of a protégé to a mentor, with the intention of somehow fostering the quality and kind of relationship seen in informal mentoring.\(^{12}\) In a formalized mentorship program, each new faculty member is ensured of having at least 1 mentor. Formal mentorship may be the preferred method when dealing with long-distance faculty members as they would not have many opportunities to meet with other faculty members and allow an informal mentorship to develop.\(^{14}\) From the standpoint of the mentor, formal mentorship may be preferred as it is more structured: institutions often give mentors outlines with specific topics that the mentor needs to address with the protégé; mentoring may take place during formal scheduled time slots and mentors may be allowed to include these meeting as faculty development time. Formal mentorship programs may also require both parties to evaluate the process in terms of objectives, communication, and outcomes. This allows for better control of the process and allows the facilitators of the program to make adjustments accordingly.\(^{15}\) While formal mentorship programs may assign mentor-protégé pairs in a time-limited manner (eg, 1 year), most of the literature emphasizes formation of a more permanent relationship. The cons of formal mentoring are that the relationship may feel forced, may be mismatched and not evolve fruitfully, or may lead to differences of opinion as the mentor and protégé get to know one another.\(^{16}\) Administrators of the mentorship program should make it clear to the mentor and protégé that if the relationship does not work out well, there will be no hard feelings and a new mentor can be assigned.\(^{12}\)

**Recommendation 2.** A formal, systematic approach to mentoring should be instituted by colleges and schools of pharmacy.

**Internal Versus External Mentors**

While the traditional dyad involves pairing a protégé with a more senior or experienced faculty member at his or her own institution (internal mentor) as his or her mentor, recruiting a distance or external mentor sometimes may be necessary.\(^{17,18}\) The escalating number of colleges and schools of pharmacy has increased the demand for faculty members, which highlights the importance of mentoring for the professional development of members of the academy. Unfortunately, new programs may not possess an adequate number of senior faculty members who are capable of mentoring.\(^{19}\) Regardless of how established a college or school is, many do not have enough existing faculty members with the experience, interest, and/or expertise to mentor new or mid-career faculty members.\(^{20}\) Likewise, faculty members who advance into leadership positions within a college may find that they can no longer confide in other college or perhaps university colleagues. While internal mentors are generally preferred, an external mentor or coach may be necessary for the successful development of a faculty member or administrator.

There are a variety of advantages to having an internal mentor.\(^{21}\) These individuals have a working knowledge of organizational history and an understanding of the culture and internal politics of the college or school, which are important in professional development and integrating with networks of influence at the institution. However, if the mentorship pairing is not predicated on similar values and interests, it may not result in a lasting relationship.\(^{22,23}\) There are also concerns regarding the consequences of dissolving the pairing. Further, if the protégé falters, the mentor may be tainted by the association.
Alternatively, judgment may be placed on the quality of mentoring.

External mentors can support their mentees regardless of where they are located, given current advances and advantages in technology (distance audiovisual communication) and social media. There are also many opportunities for face-to-face sessions at professional meetings. The major advantage to external mentorships is that they are usually formed as a result of deliberately seeking out a mentor based on similar interests and values. The mentor usually has a willingness and desire to work with the protégé, which helps establish trust. Also, external mentors may be more objective and unbiased as they may not be conflicted by organizational relationships. This may create a “safe” environment that allows for honest and critical discussion of issues that the protégé faces, without fear of retaliation or institutional gossip. It is easier to discontinue an external mentorship should it prove ineffective or if the relationship is outgrown.

The disadvantages to external mentorship may be the mentor’s lack of working knowledge of the politics, culture, and/or internal policies of the protégé’s institution and lack of familiarity with the leadership and faculty. The mentor can guide the protégé in decision-making but may not know specific processes; thus, their advice is dependent on the protégé’s representation of issues and facts.

Recommendation 3. Internal mentors should be used for junior faculty but external mentors should be considered for mid-career and senior faculty members making the transition to administrative roles.

Resources Needed for Mentoring Programs

The key resources needed for developing and sustaining a successful mentorship program include time, money, and programmatic support. One of the major obstacles to the success of a mentorship program is the time commitment and lack of incentives for more senior faculty members to engage in mentoring activities. Strategies such as rewarding mentors through formal recognition programs as well as restructuring the annual evaluation, promotion, and tenure process to acknowledge the commitment of mentors can be potential solutions. In addition to a mentor’s time, programmatic time also needs to be devoted to organizing the program, training mentors and protégés, and identifying extramural funding to support the mentorship program.

Funding for the mentoring program could be used to hire support staff members; engage external trainers, consultants, and mentors; and provide grant release time to mentors. Such support has been shown to increase the amount of extramural funding generated by the protégés, and in the long run, may contribute to faculty retention.

Programmatic support is also critical to the success of a mentorship program and resources are often needed to create formal structures. Programmatic support also includes administrative support in establishing a mentorship culture. The evidence of a mentorship culture is tangible by identifying and rewarding mentor commitment, making protégés feel supported psychologically by presenting clear expectations for progression at the institution, providing trainers and physical facilities for mentor-protégé meetings, and developing mentorship programs for faculty members at different levels of career progression. Finally, with the advantages of having external mentors and online/distance learning programs, the need to extend mentorship beyond physical premises makes technology a key resource for the mentoring toolkit.

Recommendation 4. Key resources that must be secured in order to establish a successful mentoring program include time, programmatic support, staff support, and technology.

Stages of Mentoring

While the literature is filled with manuscripts on mentoring entry-level professionals, women, and minorities, there is a paucity of information on mentoring across various career stages. In 2000, Peluchette investigated the various sources of mentors used by professionals, how they influenced professional success, and whether professionals used different sources of mentors at different stages of their careers. According to this study, assistant professors with mentors in their professions, associate professors with mentors outside the work place, and professors with mentors within their organizations had the highest levels of objective career success. When professorial rank was linked to career stage, the results suggested that the participants used different sources of mentors at different stages of their careers.

In 2007, Wasserstein and colleagues investigated faculty mentoring at a school of medicine. They examined the presence and structure of the mentoring relationship in relation to faculty rank and focused on track and gender differences; types of mentoring received; satisfaction with mentoring; use of multiple mentors; and the relationship between mentoring, overall job satisfaction, and expected job stability. The high proportion of assistant professors who reported having a mentor was largely a result of the requirement that mentors be assigned at the time of appointment. Although there was no requirement that a faculty member at the associate professor rank have a mentor, the relatively low proportion with a mentor was surprising and could reflect reduced pressure for

promotion after attaining the associate professor rank. There is a significant volume of material on succession development in the management literature. In a 2006 paper, Groves indicated that best practice organizations effectively integrate leadership development and succession planning systems by fully using managerial personnel in developing the organization’s mentor network, identifying and codifying high potential employees, developing high potentials via project-based learning experiences and manager-facilitated workshops, establishing a flexible and fluid succession planning process, creating organization-wide forums for exposing high-potential employees to multiple stakeholders, and establishing a supportive organizational culture.32

**Recommendation 5.** Multiple mentors should be considered at different stages of a faculty member’s careers and for different aspects of faculty life.

**Assessment and Evaluation of Mentoring Programs**

Annual or periodic assessment of a mentorship program is key to its success. The assessment needs to be conducted from the perspective of both protégé and mentor to understand gaps that can be addressed the following year/period. Tools have been developed and validated to measure mentoring relationship quality, commitment to the organization, job satisfaction, and self-efficacy in scholarship and research (Table 1). Meaningful data can be obtained as early as 1-2 years post-implementation and should be used to enhance mentor-protégé pairing, overall program structure and support, as well as resource allocation. Long-term measures such as faculty productivity, time to and attainment of career advancement, and overall faculty retention can be used to evaluate program success.

**Table 1. Validated Tools for Short-Term Assessment of Mentoring Programs**

<table>
<thead>
<tr>
<th>Measure/Outcomes</th>
<th>Validated Tools</th>
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<tr>
<td>Mentoring relationship quality</td>
<td>Mentoring Functions Survey33</td>
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<td>Mentoring Role Instrument34</td>
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<td></td>
<td>Mentorship Effectiveness Scale35</td>
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<tr>
<td></td>
<td>Mentor Profile Questionnaire35</td>
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<td></td>
<td>Mentor Benefits36</td>
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<tr>
<td>Organizational commitment/propensity to leave</td>
<td>Organizational Commitment Scale37</td>
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<tr>
<td>Job satisfaction</td>
<td>Propensity to Leave Scale38</td>
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<tr>
<td></td>
<td>Work-role Stress39</td>
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<td></td>
<td>Self-Esteem at Work40</td>
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<tr>
<td></td>
<td>Job Involvement Scale41</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>FIT Program Evaluation Questionnaire42</td>
</tr>
<tr>
<td>scholarship/research</td>
<td></td>
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</tbody>
</table>

**Recommendation 6.** Data from periodic, formal programmatic assessments should be obtained to determine the success of a mentorship program and used to make changes in program structure and processes.

**BEST PRACTICES**

When identifying best practices in mentorship programs, the literature reveals a wide range of potential structures and processes that includes both informal and formal programs with internal and external mentors. Successful mentoring programs consider the mentoring needs of at all faculty ranks, from assistant to full professors. Qualitative and quantitative outcome assessments should be conducted periodically to measure the success of mentoring programs; qualitative indicators include job satisfaction, organization commitment, and worker self-esteem, whereas quantitative outcomes include promotions, research publications, and grant funding received.

The common themes of successful mentoring programs include formal mentor relationships with dedicated time for mentor and protégé pairs to meet regularly, faculty development opportunities for mentors to meet as a group, flexibility to encourage informal or serendipitous mentor relationships, and a systematic assessment process. For formal mentoring programs to succeed, both parties require administrative support and time to develop the relationship. Forced or assigned formal relationships show less success than unassigned relationships; however, if a mentor is not assigned, some junior faculty members may miss the opportunity to benefit from a mentor early in their career when general guidance is needed. Informal mentoring programs result in higher self-esteem for the protégé. Thus, when formal mentoring relationships are assigned, administrators should make an effort to match the personalities of the mentor and protégé, not necessarily to match the content area. Many successful mentoring programs allow flexibility to terminate an assigned mentoring relationship without retribution to either the mentor or protégé, as may be necessary when a protégé develops an informal relationship with another mentor.

Time is needed for meetings in which the mentor and protégé plan together to achieve specific goals. Time is required not only for face-to-face meetings, but also for support to attend national professional meetings and to conduct internal development activities. Mentors should be trained as one should not assume that those with advanced rank possess the skills to effectively mentor.

Finally, successful mentoring programs, regardless of the structure, require participants to provide feedback regarding the mentoring relationship. Through systematic assessment process, each institution can adopt and make
necessary adjustments to their mentoring program to facilitate development of their entire faculty.

The PAIRS Faculty Mentorship Checklist

The PAIRS checklist was developed as a guiding framework following the Intent, Structure, Process, Resources, and Assessment structure.\(^{46}\) Intent helps examine goals and purpose(s) of the proposed or ongoing mentorship program for colleges and schools of pharmacy. These goals could be faculty development, satisfaction, retention, or a combination of these. Structure of the program includes details of planning for program oversight, the policy and procedure documents, and formally outlining mentor eligibility and incentives. Process lays out implementation steps including mentor protégé pair matching, mentor orientation and training, protégé orientation, and setting expectations of the pair. Finally, assessment and evaluation involve tools and processes for periodic assessments of mentoring relationship quality and other metrics to determine programmatic success. An earlier version of the checklist is available online on the AACP website.\(^{47}\)

The PAIRS checklist is the first attempt of its kind in academic pharmacy, intended to serve as a framework for developing or modifying mentoring programs. The checklist is broad enough in its 5 categories that it can be easily fitted for use in different types of mentorship programs (formal/informal), mentors (internal/external), area of academic profile (teaching/research/service/combination), and stages of mentoring (junior/mid-level/senior faculty). Future work can focus on testing the ease of using the Faculty Development Checklist as a framework.

CONCLUSION

Many factors contribute to a successful mentoring program and there is not one prescriptive “one size fits all approach.” It is necessary for academic institutions to lay the groundwork to foster mentoring relationships for all faculty members to ensure positive outcomes. The PAIRS checklist captures the key factors that institutions should consider when instituting or modifying a mentorship program.

REFERENCES

Appendix 1. PAIRS Checklist

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Options</th>
<th>Comments/Evidence/Resources</th>
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<tbody>
<tr>
<td></td>
<td><strong>Intent</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Examine goals and purpose(s) of mentorship program for COP/SOP</td>
<td>Satisfaction; Retention; Development</td>
<td>Depending on academic age and experience of faculty.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The goals and purposes should guide the assessment and evaluation plan.</td>
</tr>
<tr>
<td></td>
<td><strong>Structure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Oversight of program</td>
<td>Committee, a senior faculty member, or an administrator</td>
<td>Various examples exist: best practice may be an individual faculty who directs, an individual who coordinates with help from support staff; and they report to a faculty development committee.</td>
</tr>
<tr>
<td>3</td>
<td>Policy and Procedure document</td>
<td>To lay out process and rationale</td>
<td>Serves as a reminder and helps streamline process and evaluation.</td>
</tr>
<tr>
<td>4</td>
<td>Who can be a mentor?</td>
<td>Senior faculty (associate or higher level).</td>
<td>Need to be ready willing and able to mentor.</td>
</tr>
<tr>
<td>5</td>
<td>How can mentors be incentivized?</td>
<td>Service credit in promotion and annual evaluation; Travel funds; Recognition and awards</td>
<td>Increases willingness to mentor.</td>
</tr>
<tr>
<td></td>
<td><strong>Process</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mentor protégé pair matching</td>
<td>Matching mentor protégé pairs can be done by department chairs.</td>
<td>Potential chemistry between mentor and protégé is usually a prominent factor in choice, in addition to protégé career goals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A form can be developed to help assist the process – form can include protégé career goals in each area (teaching, research, service, etc).</td>
<td>A new mentor can take one protégé and then add on one more if needed.</td>
</tr>
<tr>
<td>7</td>
<td>Formal mentorship assignment</td>
<td>A formal agreement can be created that is signed off by mentor and protégé to formalize the process. The agreement can be for a certain duration (minimum of a year).</td>
<td>This agreement can help provide credit for mentors for the service, as well as help if there is need for renewal or non-renewal of the pair.</td>
</tr>
<tr>
<td>8</td>
<td>Mentor orientation and training</td>
<td>Orienting mentors to expectations from mentorship, training them on their roles and responsibilities. Occurs once a year or for newly assigned mentors usually over a meal. Director of program needs to be trained themselves and needs to develop a manual for this training. Do’s and Don’t’s of mentorship.</td>
<td>Helps reduce frustration and variability in process.</td>
</tr>
<tr>
<td>9</td>
<td>Protégé orientation</td>
<td>For new protégés to orient them to expectations of mentorship program. Occurs once when they are newly assigned. Do’s and Don’t’s of protégéship.</td>
<td>Helps protégés understand what to expect and reduces frustration.</td>
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## Appendix 1. (Continued)

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<tr>
<th>#</th>
<th>Item</th>
<th>Options</th>
<th>Comments/Evidence/Resources</th>
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| 10 | Expectations of the pair                                            | Meeting periodically (at least once a quarter).  
Offering incentives such as funds for lunch for the meetings.  
Confidential discussions.                                                                                                           | Need to be laid down in the P&P document.                                                                                                                                                                                      |
| 11 | Resources                                                            | Outlining each resource needed, methods of obtaining resource, allocation of resource and fall back in case of lack of support.                                                                          | Resources are an indicator or a culture of support for mentorship.  
Nature decide size of program and factors that may help or hinder growth or success of program.                                                                                                                             |
| 11 | Assessment and Evaluation                                            | Web-based confidential survey at mid year and annually at to assess how pairing is perceived by mentor and protégé. Can obtain meaningful data within 1-2 years of program implementation | Helps decide if goals are being met and whether modifications are needed in program or if there is conflict in the pairing.                                                                                                   |
|     |                                                                      |                                                                                                                                                                                                     | Validated instruments include:  
● Mentoring Functions Survey (Noe 1988)  
● Mentoring Role Instrument (Ragins & McFarlin 1990)  
● Mentorship Effectiveness Scale (Berk 2005)  
● Mentor Profile Questionnaire (Berk 2005)  
● Mentor Benefits (Ragins & Scandura 1999)                                                                                                                             |
| 12 | Annual assessment of mentoring relationship renewal                  | Web-based confidential survey at end of a year to assess if renewal is appropriate / desired.                                                                                                          | Non renewal needs to be conducted in a delicate manner so as to facilitate continued positive relationships.                                                                                                                  |
| 13 | Program assessment                                                   | Measures should be selected based on the goals of the decided upon mentoring program. Possible measures of program effectiveness:  
● Mentoring relationship quality  
● Organizational Commitment / Propensity to Leave  
● Job Satisfaction  
● Self-Efficacy Scholarship / Research                                                                                                                                  | CQI process; Validated instruments include:  
Organizational Commitment / Propensity to Leave:  
● Organizational Commitment Scale (Balfour & Wechsler 1990)  
● Organizational Commitment Questionnaire (Porter & Smith 1970)  
● Propensity to Leave Scale (Lyons 1971)                                                                                                                                         |
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<tr>
<td></td>
<td>Job Performance Measures</td>
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<tr>
<td></td>
<td>o Scholarly Productivity (# of publications; # of grants submitted /funded; funding (dollars))</td>
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<td></td>
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<tr>
<td></td>
<td>o Withdrawal Behaviors (absences)</td>
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<td></td>
<td></td>
<td></td>
<td>Job satisfaction:</td>
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<td></td>
<td></td>
<td></td>
<td>• Work-role Stress (Kahn et al. 1964)(^{39})</td>
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<td></td>
<td></td>
<td></td>
<td>• Self-Esteem at Work (Quinn and Shepard 1974)(^{40})</td>
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<td></td>
<td></td>
<td></td>
<td>• Job Involvement Scale (Lodahl and Kejner 1965)(^{49})</td>
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<tr>
<td></td>
<td>Career Advancement</td>
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<td>Self-efficacy in scholarship/research</td>
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<td>• FIT Program Evaluation Questionnaire (Marinac &amp; Gerkovich 2012)(^{42})</td>
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