

Establishing a Faculty Mentoring Program in an Applied Sciences Department¹

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Abstract

To help ensure the success of eight untenured faculty in the Department of Crop, Soil, and Environmental Sciences (CSES) at the University of Arkansas, a faculty mentoring program was developed in 2002. The program followed a hybrid model that integrated a social component involving minimal commitment and included everyone in the department, a circle group that met monthly and included all interested new faculty and usually a few senior faculty, and one-on-one mentoring relationships that new faculty developed with senior faculty. The social component eventually ceased after participation decreased. One-on-one mentoring became less formal after one year. As a formal entity, the circle group was sustained the longest because it was supported by junior faculty, and evolved each semester in response to faculty needs and feedback. Program benefits appeared to be limited to intangible elements, such as increased feelings of interaction among peers. Senior faculty were less inclined to feel that they benefited directly from the program. Commitment of participants, continued assessment and change in response to feedback, an internal mentoring advisory committee, and support without interference by administration were critical to the success of this program.

Introduction

One of the most precious resources at institutions of higher learning is the faculty. How can prospective faculty be encouraged to join academic units and succeed in their quest for tenure? How will new faculty and senior faculty deal with current challenges in higher education while also maintaining or improving the quality of the teaching and research in their respective institutions? Most faculty understand that they will have to work more than 40 hours per week and that they could make more money

outside academia (Holden, 2004; Trower, 2000). They like academia and that is where they want to spend their careers (Holden, 2004). However, a profession that demands too much without properly aligned extrinsic rewards can turn away qualified people (Trower, 2000).

An advantage that academia has over industry or government is job security if one receives tenure. Although the tenure system has its undeniable merits, it is also a daunting process for new faculty (Holden, 2004; Mullen and Forbes, 2000). New faculty obviously want to succeed, but they do not always know how (Cech and Bond, 2004). New faculty tend to report increased, rather than decreased, stress levels through the first five years of their initial appointments (Sorcinelli, 1994). Commonly reported concerns are related to time management, balancing work and personal life, obtaining sufficient resources to run a high quality program, vague or subjective criteria for promotion, and lack of concrete help with research and teaching, such as assistance acquired through grant proposal reviews, collaborative work, and classroom visits (Sorcinelli, 1994).

Mentoring can serve a multitude of functions to help new faculty transition into and succeed in academia and alleviate concerns. Sorcinelli (1994) published a short list of example programs for new faculty development including orientation, mentoring, and development for teaching and research. Savage et al. (2004) discussed other universities that have instituted faculty mentoring programs. Sands et al. (1991) described four types of mentors: friend, career guide, information source, and intellectual guide. In other words, protégés can receive emotional support, advice and professional promotion, information about their organizational system, and/or enter into professional collaborative relationships through mentoring (Sands et al., 1991). Models have been proposed for successful mentoring

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programs (Bower et al., 1998). Formal mentoring programs usually include written evaluations so that program components can be improved (Gaskin et al., 2003). However, while some institutions have established programs, and the need for and benefits of mentoring have been documented, in fields related to agriculture and environmental science, there is little published information on faculty mentoring programs (e.g. Eastman and Williams, 1993).

How many faculty mentoring programs exist across university campuses? That is a difficult question to answer because programs may exist unpublicized and with a range of program elements in place with varying levels of formality and utilization, providing different levels of support (e.g., see Mullen and Forbes, 2000). It also seems from testimonials that untenured faculty, while in support of effective mentoring, are not necessarily unanimously in support of formalized programs (Mullen and Forbes, 2000). However, new faculty are generally appreciative of valuable, specific insight from colleagues as can be gained through mentoring (Sorcinelli, 1994). The hesitation reported in the literature among new faculty in initiating interactions with senior faculty provides an argument for establishing a formal program (Whitt, 1991).

The purpose of this article is to share the program structure and experiences of the Department of Crop, Soil, and Environmental Sciences (CSES) at the University of Arkansas as it established a program to mentor a new class of assistant professors. CSES had eight faculty who had been employed for five years or less in January 2002. To reduce the stress and facilitate the successful start-up of the new faculty's research, teaching, and service programs, CSES implemented a faculty mentoring program. The CSES faculty mentoring program was established to mold to the needs of participants, and thus evolved following its inception. The program involved three components, and was based on documented guidelines and expectations. There were no clear extrinsic rewards or levels of recognition to encourage mentors' participation. Although it was well supported by administration, it received no funding and administrative personnel were not directly involved.

Materials and Methods

Program Establishment

The CSES Department examined the idea of faculty mentoring during a faculty development workshop held in January 2002. The workshop was facilitated by a professor from another university who specializes in faculty mentoring research. At the workshop, 35 faculty examined benefits and disadvantages of a mentoring program and were introduced to a variety of program structures such as one-on-one relationships, social and support (circle)

groups, committees, or various combinations of these options. A significant amount of time was spent analyzing and prioritizing the needs of different faculty. Determining the benefits of mentoring for both protégés and mentors was an important element of the workshop. Discovering that both parties can benefit seemed to be important to the willingness of members of the department to participate in what could be a time-consuming program.

During the workshop evaluation, when asked whether or not a mentoring program should be developed, faculty responded with an average of 8.7 (+/- 0.3) on a scale of 1 (strongly disagree) to 10 (strongly agree). When asked directly if they would be willing to participate in a mentoring program, 23 responded "yes", two responded "no", and 10 gave no response. Overall, these results indicated that by the end of the workshop there was a strong interest in developing a mentoring program. The responses were anonymous, so it was unknown who did not provide a response or why. However, it is noteworthy that of the entire faculty, 23 people work at the flagship campus in Fayetteville, while the remainder are stationed in smaller offices around the state. It was recognized from the beginning that developing a program that included people from different geographic locations would be difficult.

The main outcome of the workshop was for CSES to develop and implement a program. One of the lessons from the workshop was that to truly succeed, someone should be hired who could dedicate energies to coordinating the program. Given current fiscal constraints, this was not possible. Therefore, as a substitute, an internal mentoring advisory committee was formed to coordinate the program. The committee consisted of the following: one junior faculty, three senior faculty, one non-tenure track faculty, one faculty member from outside the main campus at Fayetteville, and a college administrator/observer. The committee was charged with developing a program structure, and implementing, documenting, and monitoring a faculty mentoring program. Mentors and protégés could also request help from this committee in resolving mentoring problems. The leadership of the committee was important in scheduling social events and initiating circle groups for each new semester.

Program Components

The advisory committee articulated three goals to express the vision borne in the faculty workshop: 1) reduce the stress experienced by junior faculty (protégés) in their achievement of career promotion, job satisfaction, and other professional goals, 2) enhance the experience and satisfaction of senior faculty (mentors) in developing professionally and personally meaningful relationships with junior

faculty, and 3) promote a sense of community, cooperation, and identity within the entire department.

To achieve these goals, CSES utilized a combination of three mentoring components: social gatherings, circle groups, and one-on-one mentoring relationships. Establishing mentoring committees for each protégé was discussed, but not included because they were viewed as too impersonal and redundant for a department which already has many committees in place to evaluate faculty's work. The social component involved a regular after-hours social time for families of faculty, staff, and graduate students in an off-campus, relaxed atmosphere. The circle-mentoring system consisted of groups of fewer than a dozen protégés and mentors meeting periodically over a defined time span, usually a semester, to discuss matters that may emerge more naturally in a group situation. The advantage of the group format is that questions and good ideas could be shared and embellished by several individuals at one time within a dynamic group. The members of a particular group took part voluntarily and did not necessarily comprise one-on-one mentoring partners. The make-up of a group could change each semester when new groups formed. Finally, in order to foster confidential and sustaining partnerships, one-on-one mentoring relationships between a protégé and a mentor were encouraged. Recognizing that individuals have different strengths and weaknesses, protégés were encouraged to choose more than one mentor to help ensure that they were receiving the appropriate level of guidance in complementary areas. For example, one mentor could be a research collaborator and the second a generalist who provided guidance dealing with issues arising in academic life. Protégés were expected to initiate one-on-one mentoring relationships by inviting senior faculty to serve as mentors. The advisory committee also kept a list of senior faculty volunteers. New faculty were encouraged to take some time to meet senior faculty before selecting potential mentors.

In addition to providing the structural framework of the program, the advisory committee articulated expectations of mentors and protégés. It was important that the program had clear, formal, but not rigid guidelines to encourage a high level of commitment by participants. These expectations covered documentation, level of commitment, and evaluation of progress. Participants were expected to document their partnership by signing a contract. This practice had been highly encouraged at the departmental workshop to help both parties clearly establish expectations for the relationship. Sample contracts were developed to address frequency and formats of meeting times, articulate codes of conduct, and provide a means to dissolve an unproductive relation-

ship. (Copies of contracts can be obtained from the authors.) It was expected that one-on-one mentoring participants would revisit the contract annually. Circle groups, on the other hand, would redraw contracts at the beginning of each semester. In addition to promoting commitment, documentation helped participants track progress and minimize potential misunderstandings. Documentation by participants of topic areas was encouraged and could be kept by the participants for their own purposes and remained confidential. Under no circumstances could any mentoring documents or personal knowledge be communicated to any administrators.

The mentoring advisory committee used annual surveys to periodically evaluate and adjust components to improve the program's effectiveness. Surveys were sent to departmental faculty on an annual basis to gather feedback on program components. Results of two surveys, one sent in September 2002, about eight months after program initiation and the second sent in August 2003, 1.5 years after program initiation, are included in this report. Faculty were asked to respond to open-ended questions and indicate their level of agreement with statements using a 5-point Likert-type scale (1 = "strongly disagree" to 5 = "strongly agree"). Responses > 3 were considered positive, responses equal to 3 were considered neutral, and responses < 3 were considered negative.

Results and Discussion of Program Implementation

Overall

The program was open to faculty regardless of whether they were tenure or non-tenure track, and both types of faculty participated. All untenured faculty on campus participated in at least one of the components of the program. Fourteen senior faculty volunteered to be mentors. Support for the program continued to be strong through the first two years, although participation in the social component decreased in the second year. Social gatherings were not scheduled following the second year of the program. In contrast, the circle group continued to be a valued component. All untenured CSES faculty continued to participate in the circle group through the spring 2004 semester, and in the fall of 2004 untenured faculty within the Dale Bumpers College of Agricultural, Food, and Life Sciences were invited to circle group meetings.

From survey results, benefits derived from the program appeared to be limited to some intangible aspects of the job, such as increased interactions with peers and learning the prevailing politics (Table 1). Protégés were more positive and less variable in responses than mentors concerning benefits of the program (Table 1). In terms of stress reduction, one of

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Table 1. Mean values (standard deviation) of faculty responses to surveys concerning the benefits of participating in the Department of Crop, Soil, and Environmental Sciences Faculty Mentoring Program (n = 6 to 11, depending on year and question)

Year	Faculty role	Perceived benefits							
		reduce stress	increase interactions	intangibles/politics	overall productivity	research	teaching	student dealings	relevancy of circle groups
2002	Protégé	3.0 ² (0.6)	4.4 (0.5)	4.0 (0.0)	3.0 (0.7)	NA ³	NA	NA	4.0 (0.0)
	Mentor	3.0 (0.6)	4.2 (0.4)	3.2 (0.7)	2.6 (0.5)	NA	NA	NA	3.4 (1.0)
2003	Protégé	3.2 (0.4)	3.7 (0.4)	4.2 (0.4)	NA	2.5 (0.5)	3.0 (0.7)	3.0 (0.7)	5.0 (0.0)
	Mentor	2.2 (1.2)	2.8 (1.8)	2.2 (3.1)	NA	1.8 (1.2)	1.8 (1.2)	2.0 (1.4)	4.2 (0.4)

²Respondents were asked to indicate their level of agreement with statements on a scale from 1 to 5, with 5 being "strongly agree" and 1 being "strongly disagree." Values > 3 were considered positive, values of 3 are neutral, and values < 3 are negative.

³Not applicable, question not asked in survey.

the program goals, protégés were neutral in response. When specifically asked during the second year, protégés and mentors were neutral or negative in response to the statements that mentoring helped them with their research program, teaching responsibilities or skills, service component (data not shown), or finding or training students (Table 1). During the first year of the program, mentors responded neutrally or positively to statements, except when asked if the mentoring program increased productivity. However, in the second year, mentors responded negatively to statements regarding benefits (Table 1). While survey responses from the mentors may bring into question the value of the program, protégés did respond that the program was helping them deal with personnel issues involving employees in their laboratories (data not shown). Participants also consistently agreed that the program should be continued (data not shown). Thus, despite the lack of specific tangible benefits, the intangible benefits appeared to be strong enough to continue to generate support. No doubt, many benefits are indirect and difficult to express or quantify in questionnaire responses. These findings are similar to those of agricultural education faculty who reported increased feelings of satisfaction with their jobs and career progress, even though mentoring was not related to most objective job indicators (Eastman and Williams, 1993).

Social Gatherings

Upon initiation, social gatherings were held every other week. After one semester, gatherings were held once per month. After a year, attendance decreased and faculty suggested meeting less often (every other month) or changing the format. The format for the first five semesters was to meet in a local restaurant or bar. This venue, however, was difficult for families and may have contributed to the decrease in attendance. Despite the decrease in attendance (20 people reported attending in 2002, but only 14 reported attending in 2003 surveys), faculty indicated that the social component was important (77% of survey respondents in 2003 agreed or strongly agreed that social events should continue). It seemed that social gatherings were sup-

ported in theory, but were difficult to sustain in practice.

One-on-One Mentoring Relationships

Mentors and protégés were positive about their one-on-one relationships. However, due to the confidential nature of the relationships, it is more difficult to objectively assess the success of one-on-one relationships. In 2002, five untenured faculty filled out a contract with a one-on-one mentor, with one of those faculty members signing contracts with two mentors. The other three untenured faculty utilized mentors, but chose not to sign contracts. Two of those faculty had been in the state system for a number of years previous to obtaining their faculty positions and already had established relationships with mentors. Additionally, the idea of completing contracts and meeting on a regular basis may have been too formal, and they felt more comfortable approaching various faculty for specific help when needed. In 2003, no new contracts were submitted to the advisory committee, so it appeared that new faculty opted to establish less formal one-on-one relationships in subsequent years. Despite not having a new contract, three protégés and two mentors reported positively on the success of their relationships in 2003 surveys (data not shown).

Circle Groups

Circle groups were a particularly strong component of the mentoring program. They 1) allowed for timely discussion of multiple issues commonly encountered among new faculty, 2) provided a supportive atmosphere, and 3) did not require the same level of intensity or vulnerability as the one-on-one mentoring relationships. The idea of the circle groups did not change throughout the program. However, the structure did evolve, which most likely contributed to the success of this component. When the program was initiated, faculty were divided into two groups, each consisted of three to four new faculty and about 10 people total. At the conclusion of the first semester, junior faculty reported that they would like to be in one group. Therefore, for the second semester, only one group was formed with new faculty, and two different senior faculty joined the

group each month. However, rotating in different senior faculty every month was counterproductive to the formation of interpersonal bonds among participants. Additionally, some personalities were better suited for group mentoring than others. Thus, for the third semester, three senior faculty were invited by the junior faculty to join the mentoring group. Both protégés and mentors responded positively that these groups were well supported, beneficial, and relevant (Table 1). Specific benefits of the circle group were related to those described for the program in general: increased interaction with peers, timely discussion of relevant issues, and integration within the department (data not shown).

Following the third version of the circle group, some faculty expressed the opinion that the circle group had evolved to where it needed to become more focused. Thus, for the fourth semester, the circle group continued to be open to the discussion of any pertinent faculty concerns, but there was also a theme for each meeting. Initially, the groups kept the themes as possible contingency topics in case there was nothing pressing that junior faculty wanted to address. As groups met throughout the semester, there did not seem to be any need for back-up themes. As a result, some faculty seemed to lose interest in discussions on random topics. The following semester, the circle group evolved again and consisted of only junior faculty who met without any senior faculty. After that semester, untenured faculty from outside the department but within the college were invited and a few senior faculty were asked if they would join the group. Advantages of broadening accessibility of the program to other protégés include establishing relationships with mentors outside the department who were less likely to be influencing promotion decisions, and interacting with an extended peer group. Once again, the structure seemed to be well suited to the needs of the junior faculty at that time and served to maintain the interest and relevancy for junior faculty. As a final note, the potential for increasing the scale of the program has not been fully explored, but may be necessary for long-term program sustainability.

Program Sustainability

The CSES faculty mentoring program was established in 2002. Definition of a structure made it possible to initiate a formal program. The intent of the CSES Department was to integrate various components into one a program that was fluid enough to allow changes to maintain its relevancy. Of the eight originally untenured faculty, four have been granted tenure, one left the university, and the other three are going through the tenure process. The true level of success may only be measurable qualitatively after all the new faculty have been through the

tenure process. In contrast, due to the program's subjective nature and lack of a control group, quantitative assessment is not possible. However, the faculty mentoring program was successful in that faculty continued to utilize aspects of the program for multiple years. Participation in the formal program is declining as people receive tenure. While this may suggest that the program is not sustainable, a structure has been established with components that allow for varying intensity in participation. Based on survey results, the department as a whole continues to support the program (data not shown), although participation in the program may ebb and flow as needs diminish and arise. Should the department see another influx of several faculty, or as attention of the recently tenured faculty turns to further promotion, the existence of a program structure may rekindle interest in various mentoring program components. Recently tenured professors could serve as effective mentors themselves for the next influx of junior faculty because of their particular experience of having been on the receiving end of this service.

Annual evaluations in the form of surveys allowed for continued feedback concerning the CSES program. Results supported the assertion that to continue to be successful, the program needed to be able to evolve. Feedback after the third semester of the program suggested that the program had matured to the point where continuing education, such as mentor training, needed to be incorporated into the program (data not shown). Providing training or sessions for mentors can help improve the chance of success for mentoring programs (Gaskin et al., 2003). This is an area that needs to be addressed by the mentoring advisory committee and may be an adaptation that maintains program sustainability.

Summary

While all three components (social events, circle groups, and one-on-one relationships) appeared to contribute to the successful initiation of the mentoring program in CSES, the social events were not sustained. One-on-one mentoring was an important component, but evolved into a less formal structure after the first year. Circle groups were an important component and evolved the most. While faculty may not reap tangible benefits, protégés continued to participate and reported benefits in intangible areas, such as enhanced interactions with other faculty and discussion of contemporary issues. Senior faculty participated initially because they too found increased interactions with their peers to be a benefit and later because of their interest in assisting new faculty in achieving professional success. However, as time progressed senior faculty were less inclined to feel that they benefited directly. In

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summary, participation, administrative support, attention to structural organization, and periodic evaluation that led to refinement or refocusing have been essential elements of this faculty mentoring program. CSES experiences may serve as a testament to academic departments that do not have traditions of faculty mentoring programs that they can establish programs when the need arises.

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