

ABSTRACT

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INFORMATION SEEKING IN MENTORING

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For tenure-track faculty, mentoring can be an important source of information needed for success in their new career and institution. Although information behavior is central to the mentoring relationship, mentoring has not yet been looked at through an information behavior lens. This study sought to begin to fill this gap by investigating mentees' perceptions regarding how mentees and mentors share information, what motivates mentees to seek information, what barriers exist to their information seeking, and what contributes to a successful mentoring relationship. Data were collected using a Web survey and follow-up interviews, both of which explored the mentoring experiences of tenure-track faculty at a major mid-Atlantic research university. Study findings suggest that the information seeking of mentees is akin to browsing in a document collection, that mentees' information needs are fluid and highly contextualized, and that there are affective barriers to information seeking within the context of the mentoring relationship.

From Someone Who Has Been There: Information Seeking in Mentoring

By

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Introduction

Mentoring programs have long been used in the business arena, and they are becoming more common in education as well. In fact, mentoring plays a crucial role in creating a successful academic career (Blackburn, Chapman, & Cameron, 1981; Sorcinelli & Yun, 2007). Of course it's not impossible to succeed in academe without the support of a mentor, but faculty tend to do much better when they are supported by one or more mentors (Carey & Weissman, 2010; van Emmerik, 2004). In acknowledgement, the Strategic Plan for the University of Maryland (2008) explicitly states that new tenure-track faculty "will be supported by robust programs of mentoring and professional and career development" (p. 20) as they work toward promotion and tenure.

A mentor may become the first node in a rich social network, may provide the technical knowhow and motivation to help a new faculty member get a research program up and running, or may simply provide the sometimes isolated scholar with a listening ear. Ironically, as mentoring programs become more popular on university campuses, there is not much attention paid to what makes these programs most effective (Allen, Eby, & Lentz, 2006). Ideally, mentoring is the process of transferring cultural information about an organization. The mentor has knowledge of department politics and advice about how to reach goals that will accomplish the work and satisfy the tenure review committee (Palgi & Moore, 2004). Despite the central importance of this process of information transfer, however, mentoring has never been studied from the perspective of information behavior. Through the lens of information behavior theory, particularly as it deals with the affective qualities of information seeking, one may see that there are often barriers to information transfer between the mentor and the mentee. The purpose of

this study is to identify and characterize those barriers from the perspective of actual mentees and to make recommendations for reducing or removing them.

Successful mentoring has an inestimable effect on the careers of junior faculty members, but as an explicit professional development program, it suffers from informality. Department administrators are reluctant to impose ideas of how a mentoring program should work, particularly as it is commonly believed that mentoring relationships should develop naturally, without the influence of administrators (Zellers, Howard, & Barcic, 2008). Faculty who are less comfortable forming strong interpersonal bonds may be less likely to reach out to the junior faculty they have been assigned to mentor, and their reluctance may be exacerbated if the junior faculty member is of a different race or gender (Stanley & Lincoln, 2005). Similarly, junior faculty who arrive on campus with little to no social network may find a host of reasons not to ‘bother’ their mentor – perhaps because the mentor is a highly respected scholar, or because the mentor is too busy, or simply because the mentee doesn’t want to waste the mentor’s time (Blickle, Schneider, Meurs, & Perrewé, 2010).

Evaluating mentoring programs from different perspectives, such as the perspective of information behavior theory, will help us to understand what makes mentoring successful, as well as to develop best practices for formal mentoring programs. Junior faculty face various cognitive and affective barriers as they seek information from their mentors – information necessary for their orientation and professional development. However, no study has examined their information behaviors, or the information-related barriers they face. Based on the findings of this study, I will make recommendations that

may assist faculty members in overcoming such barriers, as well as to help administrators in identifying mentoring best practices.

The research questions driving this study are:

RQ1: How do people share information within the context of their mentoring relationship?

RQ2: What motivates people to look for information within the context of the mentoring relationship?

RQ3: What are the barriers to information seeking within the context of the mentoring relationship?

RQ4: What makes for a successful mentoring relationship?

For the purposes of this study, it was decided to focus on the mentees, as they are most likely to be seeking information in the context of the mentoring relationship.

Tenure-track faculty members at a major mid-Atlantic research university were invited to complete an on-line survey which was designed to collect information that might begin to answer the above research questions. Following completion of the survey, faculty members saw a web page inviting them to participate in an interview, to provide more in-depth information about the mentoring relationship.

One needn't be standing in the middle of the sunny green quadrangle to know that the whole university system is shifting under our feet. Expectations, finances, and responsibilities are all changing, as the university system is reexamined and reconfigured. It is the junior faculty now entering the system who will need to find answers to the questions confronting American universities. These new faculty members can guide academe through the changes to come. However, without mentoring, the pool of junior

faculty who will be in a position to develop the new academy is likely to be much diminished. Mentoring gives junior faculty the support they need to make the transition from graduate school or post-doctoral training to a tenured faculty position. Through mentoring, faculty are much more likely to reach their full potential (Allen et al., 2006; Berk, Berg, Mortimer, Walton-Moss, & Yeo, 2005; Blickle et al., 2010).

In the following section, I will outline the literatures that informed the development of this study: literature relating to mentoring, and literature relating to information behavior. Then, I will describe my research design, in order to show how I have collected data to answer my research questions. Finally, I will discuss the findings of the study, and conclude by making recommendations for improving mentoring as it is implemented at this university and elsewhere.

Literature Review

This literature review will describe two distinct areas of study:

1. Mentoring as a process and as a professional development strategy, and
2. The theories and models that describe information behavior in ways that relate to mentoring.

The first section will provide an overview of the studies that have evaluated various aspects of mentoring, defined as “a reciprocal learning relationship characterized by trust, respect, and commitment, in which a mentor supports the professional and personal development of another by sharing his or her life experiences, influence, and expertise” (Zellers et al., 2008). The goal of the second section is to review applicable information behavior studies and show how information behavior theory may be applied to the study of mentoring.

Mentoring programs are regularly studied, both in business and in academe, but they have thus far never been studied from the perspective of information behavior. Surveyed research falls into three main categories: studies of how the mentor may affect the mentee (Blackburn et al., 1981; Palgi & Moore, 2004; Ragins, 1997; Sugimoto, 2012); studies quantifying the characteristics of a specific program (Allen et al., 2006; Blickle et al., 2010; Thurston, Navarrete, & Miller, 2009), or the ideal program (Carey & Weissman, 2010; Hansman, 2003); and finally commentary pieces about how to choose a mentor (Ensher & Murphy, 2006; Hansman, 2003) and what junior faculty need from their mentors (Leslie, Lingard, & Whyte, 2005). The informal nature of the mentoring relationship and the vast differences in mentoring programs that have been institutionalized make it difficult to develop any empirical data about mentoring or even to identify best practices (Zellers et al., 2008).

Within the larger context of the mentoring studies that have taken place recently, there are themes that have bearing on the study of mentoring as an information-seeking process. As noted in several studies, mentoring as a professional development strategy is challenged by the lack of a formal definition of the term (Berk et al., 2005; Sorcinelli & Yun, 2007; Zellers et al., 2008). Mentors and their mentees have difficulty when the relationship is not clearly defined in terms understandable to each side. The mentee's uncertainty about boundaries can make it difficult to seek information (Allen et al., 2006; Blickle et al., 2010; Stanley & Lincoln, 2005).

A few studies have addressed the barriers that may constrain the mentoring relationship (Blickle et al., 2010; Palgi & Moore, 2004; Stanley & Lincoln, 2005). Though none refer to barriers to information-seeking behavior, such barriers may be

considered implicit if there is a barrier to mentoring in general. Studies also comment on the benefit to the relationship if the mentee is involved in choosing the mentor (Allen et al., 2006; Carey & Weissman, 2010; Sorcinelli & Yun, 2007); such a level of control may likely be beneficial to the foundations of the relationship. Almost every study reviewed for this literature review refers to the roles that a mentor might play for the mentee (Allen et al., 2006; Blackburn et al., 1981; Hansman, 2003; Thurston et al., 2009; Ugrin, Odom, & Pearson, 2008). Finally, some studies commented on beneficial characteristics of the mentor, and the ways that those characteristics could affect the mentoring relationship (Allen et al., 2006; Berk et al., 2005; Carey & Weissman, 2010; Stanley & Lincoln, 2005; Thurston et al., 2009), which is related to the definition of a successful mentoring relationship.

Information behavior is at the heart of mentoring, though mentoring has never been studied from this perspective. In every mentoring relationship, at least some information is transferred, even if it is only how to request a key to the outer door of one's building (Thurston et al., 2009). Usually, however, the information exchanged between mentor and mentee is of far greater consequence. Considering the ways that mentors and mentees share information, the motivations to seeking information in the mentoring relationship, as well as the barriers to information-seeking in the mentoring relationship, may well give us new insight into the challenges faced by both mentees and mentors.

It is therefore appropriate to consider information behavior theory, especially those frameworks and models that make it easier to recognize common information behaviors in new contexts. In the examination that follows, various models are reviewed

which show that information needs are contextual and evolving. This is relevant to the mentoring relationship, as it expresses how a mentee cannot generally frame an information need as a single query, but instead needs continuous access to the information source, such as a mentor.

It is only in the last few decades of the study of information behavior that the focus has shifted from the information to the user of that information. This paradigmatic shift (Kuhn, 2012) from information to user is representative of ongoing cultural swings that first privilege the individual, and then the group or society. When information behavior theory focuses on information rather than on the user, as was the case at least until Taylor's description of information needs in 1968, the information must be defined in some concrete way, based on the epistemological assumption that every individual will experience that information in the same way. Meaning of the information is derived externally, and creative interpretation is constrained. The group – all those who understand the information in the same way – is privileged over the individual. In other eras, there is greater allowance made for differing theories of knowledge, so that individuals with fundamentally different understandings of some piece of information may peaceably coexist. At those times, the individual is privileged over the group. This is relevant to the study of mentoring in that a mentoring program is based on the concept that each individual will have different information needs, needs which cannot be completely met by a faculty handbook or similar document.

In the context of the present study, an individual's information needs are conceived of as fluid, contextual and temporal, in contrast to earlier studies of information use and information systems which were framed by a classical / positivist

conception of information or knowledge as having a fixed, universal meaning (Leedom, Eggleston, & Ntuen, 2007). Using this framework, knowledge is considered to be developed in the same way by every individual, suggesting both that knowledge can be broken down into discrete chunks of data, and that the process of information transfer is repeatable. Sense-making or constructivist theories of information behavior form the alternative, as they acknowledge that what constitutes information is highly individual, perceptual, contextual, and even temporal (Bates, 1979; Dervin, 2003; Kuhlthau, 1991; Leedom et al., 2007; Savolainen, 2006).

A sense-making, constructivist framework for theories of information behavior is closely related to the practice of mentoring of junior faculty. This framework acknowledges that meaning and truth are established by an individual based on unique interests and experience, and that knowledge comes from understanding informed by history and culture. Junior faculty have information needs that are highly individual and contextual; these faculty are not fully served by simplistic, one-size-fits-all information sources such as faculty handbooks or lists of frequently asked questions.

However, the development of a rich, meaningful mentoring program faces resistance both from tenured faculty who would serve as mentors, and from administrators who are reluctant to invest energy and funds in a program for which success measures are difficult to define. Currently tenured faculty may resist mentoring programs because they weren't mentored when they were approaching tenure (Hansman, 2003). These resistant faculty suggest that if they hadn't needed a mentor, why should the new generation of faculty? This attitude makes no allowances for the way different individuals experience situations differently, and have different information needs.

Further, mentoring programs may be seen by administrators as costly and burdensome to administer. A faculty handbook or a web page listing frequently asked questions seems like a much simpler solution to the problem of professional development for faculty. However, according to the earliest studies of mentoring (Kram, 1985), mentorship has both career and psychosocial dimensions, involving sponsorship, coaching, protection, counseling, confirmation, and friendship, just to name a few. Imagine the faculty handbook that could provide all of these. Further, the faculty handbook or the FAQ assumes that the information needs of junior faculty can be identified in advance (in order to create the FAQ), and that those needs will be the same for every faculty member. In other words, for a department or college to rely solely on such documents for professional development privileges the document, the information, over the individual, the faculty member.

In contrast are several information behavior theories that focus on the information behaviors of the individual, considering the multidimensional aspects of his or her present context. Several of these theories are appropriate for describing the information environment of junior faculty members, as well as the barriers to information seeking that they may face. First, the junior faculty member is often constrained in his or her information seeking by lack of time. Junior faculty at a research university have a number of responsibilities for which their graduate school career has not prepared them. New faculty may be designing and setting up a lab, recruiting graduate students, outlining a research program, applying for grants, writing about their research, teaching classes, and serving on committees, and the sheer volume of effort required may make it challenging to pursue information that might make the job easier – a classic Catch-22 scenario. To a

certain extent, these faculty are unable to seek information outside their daily circle of experience, a situation analogous to Chatman's (1991) small world theory. As she described it, the small world is where people have little contact with anyone outside their immediate milieu. Further, they are only interested in information that is readily identifiable as useful and practical (Savolainen, 2009), which limits the possibility of discovering useful information through serendipity.

The information seeking of junior faculty may also be challenged by the nature of their relationship to their mentors. In a program where the mentee is paired with a senior faculty member from the same department and research area, the mentee's knowledge of the mentor's seniority and accomplishments in the discipline may lead to a sense of humility, a feeling that it's important not to waste the mentor's time (Stanley & Lincoln, 2005). This may be considered a form of library anxiety (Katopol, 2005), an affective barrier to information seeking. As defined by Mellon (1986), library anxiety constrains the information seeker from asking questions of library staff, in order to avoid appearing inadequate (Katopol, 2005). However, information needs are not always immediately apparent, and affective barriers may interrupt cognitive processing (Nahl, 2005). Therefore, the mentee may identify a question about travel reimbursement and email it to a mentor, when the real information need has to do with the comparative value of a poster presentation at an international conference, versus an invited talk at a less prestigious conference close to home. The latter information need might not be met, because there was no sharing of the true information need – no time for it to come up in casual conversation, since the entire information transfer took place via email. As noted by an interview subject in Taylor's (1968) study of information seeking, "The fact that they

write the question doesn't help one bit. We think if it's written it's clear. ... But you get no feedback with writing. It's the dialogue, the feedback, that is the important thing" (p. 184). For both mentee and mentor, the challenge lies in taking the time for the dialogue and feedback to happen.

Such dialogue between mentor and mentee might be conceived of as a type of browsing, which is defined as semi-directed searching in an area of potential interest (Ellis, 2005). Kuhlthau (2004) describes the value of an "invitational" mood in information seeking, in the sense that one is simply open to new ideas, and she contrasts this with the "indicative" mood, which leads one to conclusive actions. Under the constraining sense of the value of a mentor's time, the mentee may never have the freedom to enter the "invitational" mood. As Taylor (1968) noted, describing what you don't know to someone you don't know all that well is a very complex act of communication.

Junior faculty may also face a barrier to information seeking in that they inhabit a culture which highly prizes organized thought. However, according to Bates' (1989) berrypicking model, the search for information is not a straight line from the query to the document. Instead, the query changes and evolves during the course of searching (Bates, 1989; Taylor, 1968). In the library, this might entail review of a source cited in the first article found, or simply scanning the shelves near the first source. For a mentee in conversation with his or her mentor, the berrypicking model would suggest the freedom to change the subject, to follow up on a chance remark, to make conceptual connections of dubious logic, an idea similar to Pirolli & Card's (1999) information patches, which conceptualizes useful information as being located in clumps or patches. Recognizing

this, the information seeker closely examines the surrounding area after discovery of a good source. In the library, this might mean examining the shelves near the original source to see if there are other items of interest. In a discussion between mentor and mentee, the equivalent might be the mentee following up on a topic with an additional question, even if that question appeared digressive. But again, the formality of the relationship between mentor and mentee would likely preclude such berrypicking moves. Models like berrypicking and information patches acknowledge the contextual nature of the information need, and the way that need evolves over time. These models can inform the mentee-mentor relationship in fruitful ways, by creating space where the transfer of cultural information can take place.

Problem Statement

The mentoring relationship is increasingly recognized as a valuable method for orientation and professional development of junior faculty. However, before junior faculty can take full advantage of the mentoring relationship, they face various cognitive and affective barriers to their information seeking. Heretofore, no study has examined the information-seeking behaviors of faculty in a mentoring relationship, or the barriers they face in seeking information. In identifying such barriers, this study may assist mentees and mentors in overcoming them, as well as assist administration in the identification of mentoring best practices.

Research Questions

The research questions underlying this study are:

RQ1: How do people share information within the context of their mentoring relationship?

RQ2: What motivates people to look for information within the context of the mentoring relationship?

RQ3: What are the barriers to information seeking within the context of the mentoring relationship?

RQ4: What makes for a successful mentoring relationship?

Research Design

In consideration of both the nature of the research questions and the limitations inherent in master's thesis research, it was determined that a mixed-methods study involving a survey and follow-up semi-structured interviews would be an appropriate design for this inquiry. Using a survey, quantitative and qualitative data were collected from many respondents. The interviews, conducted with a comparatively small number of participants, provided qualitative data of greater depth (Walliman, 2010), and also offered the opportunity for greater flexibility in pursuing the individual voices and experiences of the mentees (Creswell & Creswell, 2005).

Recruitment.

The sampling frame for this study was defined as tenure-track faculty members at a major mid-Atlantic university. Through querying the university's personnel database, a list of email addresses for 366 tenure-track faculty was developed – the entire tenure-track population on campus in November 2012. These faculty members were invited via email (Appendix A) to take the online survey. The email invitation explained the purpose of the survey, but also noted that the aggregate results of the research would be used by the Office of Faculty Affairs. Following the initial invitation, two reminders were sent, at intervals of one week. In January 2013, the survey was closed. When faculty members

completed the survey, they were redirected to a web page (Appendix B) with a message inviting them to be interviewed. Survey respondents who were willing to be interviewed could complete an online form with their contact information.

Data Collection.

The survey instrument (Appendix C) was developed to cover four broad areas: demographic information, general attitudes toward mentoring, the mentee's relationship with his or her mentor, and other sources of information that they tend to consult. Except for the demographic section, each of the other sections includes questions intended to address aspects of the research questions. The survey was designed to take less than 15 minutes to complete, in order to improve the response rate (Bogen, 1996). The survey includes both closed format questions and open format questions, in an attempt to capture different aspects of the mentoring relationship. None of the questions on the survey were required except for the respondent's indication of agreement with the consent form, as it was felt that the respondents must be free to ignore questions they didn't wish to answer. In addition, there was no attempt to collect identifying information about the survey respondent, or to verify that the respondent was in fact a tenure-track faculty member. However, since the survey invitation was sent only to tenure-track faculty members, it seemed unlikely that others would happen on the link and take the time to complete the survey.

The survey was coded as a web database application, using ColdFusion and an Oracle data table. The survey was hosted on the Faculty Affairs website and included design elements such as screen fonts and header and footer graphical elements that would make it apparent to a user that the survey was being hosted through Faculty Affairs.

Each survey respondent was assigned a unique ID number upon entering the survey, in order to segregate information provided by a single individual. Most responses to survey questions were stored in code, such as the number 5 instead of “Very Satisfied” in response to a Likert-type question. Exceptions were items that did not lend themselves to numeric coding, such as the respondent’s department affiliation, and any comments the respondent made in open format questions. Respondents were limited to 2,000 characters for each of three long open format questions, but there was no indication that any respondent had more to say than could be collected in those fields. Survey responses were stored online in an Oracle data table until the survey was closed, when they were downloaded for analysis.

Twenty-nine percent (n=30) of the 102 survey respondents also volunteered to be interviewed. Purposive sampling was used to rank volunteers in order to create a sample with diversity in gender, discipline and in the amount of experience as an assistant professor. Following this ranking process, the interview volunteers were contacted according to their ranked order to arrange a convenient time and location for the interview. If a volunteer did not respond to the contact, his or her name was replaced by someone lower down in the ranking. In this way, interviews were set up with nine faculty members. All but one of the interviews took place in the faculty member’s office; the one exception was a faculty member who was interviewed in a conference room.

The semi-structured interviews all began with the same interview script (Appendix D), but varied as necessary to follow up on the participant’s comments. Interviews averaged 34 minutes, with the shortest interview lasting 21 minutes, and the

longest lasting 52 minutes. Interviews were digitally recorded and the recordings were then transcribed, largely verbatim, to prepare them for analysis.

Data Analysis.

Data collected through the survey were analyzed using a combination of SPSS and Excel. Data collected through the interviews were analyzed using NVivo 10 qualitative data analysis software. First, a thematic coding scheme was applied to the interview transcripts (Appendix E), and then the transcripts were coded according to a structural scheme. The thematic scheme was developed following a recursive process (Ruona, 2005) in which codes were created beginning with the first transcribed interview. As codes developed from later interview transcripts, the earlier transcripts were reviewed and the new codes applied as necessary. The coded transcripts were reviewed for interesting, surprising and expected elements (Creswell, 2007). Finally, the interview transcripts were recoded according to a structural scheme, which organized the data according to which interview question had elicited it.

Findings

In the section below, I will detail the findings of this study. First, information about who the survey respondents and interview participants are will be provided. Then, findings from the study will be presented as they relate to the research questions.

Survey Respondents

Survey invitations were sent to 366 tenure-track faculty members. 103 survey responses were received, but one was discarded, as it was clearly a duplicate. The survey response rate was 28%. Survey respondents were asked to indicate their department affiliation, but one-third chose not to answer that question. The departments that were indicated were then categorized by college. Participation by college was evaluated

against the total of survey participants who indicated a department affiliation (n=66), and was found to range from a high of 24% (n=16) from the College of Agriculture, to a low of 2% (n=1) from the School of Architecture.

Survey respondents that did indicate a department affiliation, as indicated in Figure 1, comprised around 30% of the assistant professors in their respective colleges. The highest proportional rate of response came from the School of Public Policy, at 40% (n=2/5), while the lowest was that of the Smith School of Business, at 8% (n=3/37). The largest number of survey responses came from the College of Agriculture (n=16/56).

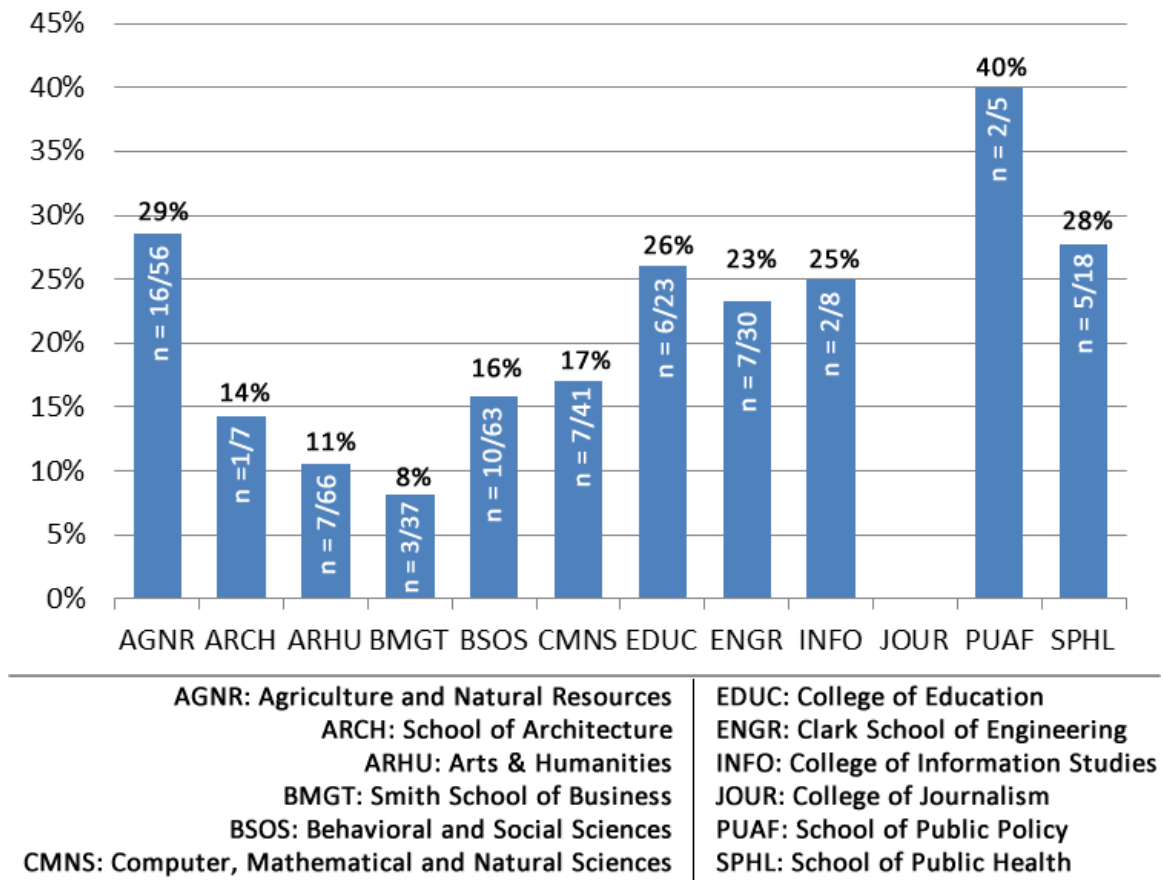


Figure 1. Number of Survey Respondents as a Proportion of all Assistant Professors by College

Figure 2 shows the distribution of survey respondents by age, gender, and the educational attainment of the most educated parent. The age of survey respondents ranged from a low of 27 to a high of 58, but the mean was 38, and the mode 35. While 8 survey respondents chose not to indicate their race, 63 (61%) indicated white, 9 (9%) were Black / African-American, 9 (9%) were Hispanic / Latino, and 14 (14%) were Asian / Pacific Islander. Three quarters (n=73) of the survey respondents are married, and just over half (n=53) are parents. Survey respondents came from educated families; 70 percent (n=70) had a parent with at least a four-year degree.

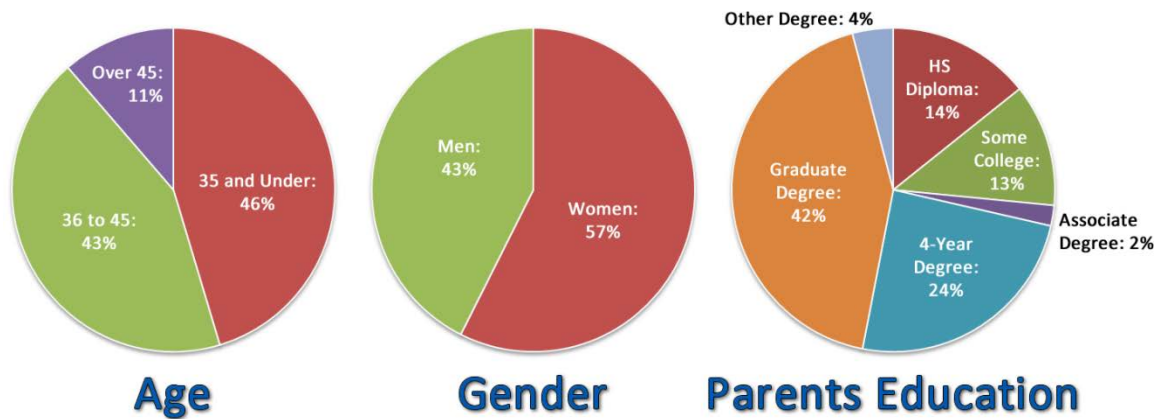


Figure 2. Distribution of Survey Respondents by Age, Gender and Educational Attainment of Most Educated Parent

Race and gender breakdowns for survey respondents do not generally align with the population of all assistant professors. Forty-six percent of assistant professors are female, but 56% (n=58) of survey respondents were female. There were also variations in the proportion of racial or ethnic groups in the survey participation. Survey respondents were not representative of the population, as noted in Figure 3, which compares the gender proportion of survey respondents to that of the population of assistant professors,

and Figure 4, which compares the race / ethnicity of survey respondents with the assistant professor population.

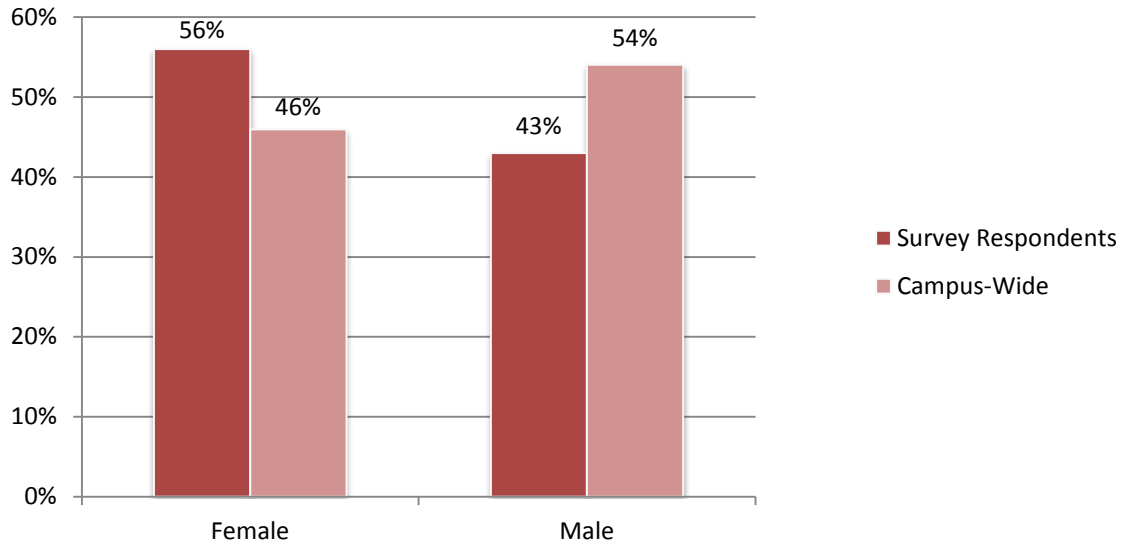


Figure 3. Gender Breakdown of Survey Respondents vs. Total Campus Population of Assistant Professors

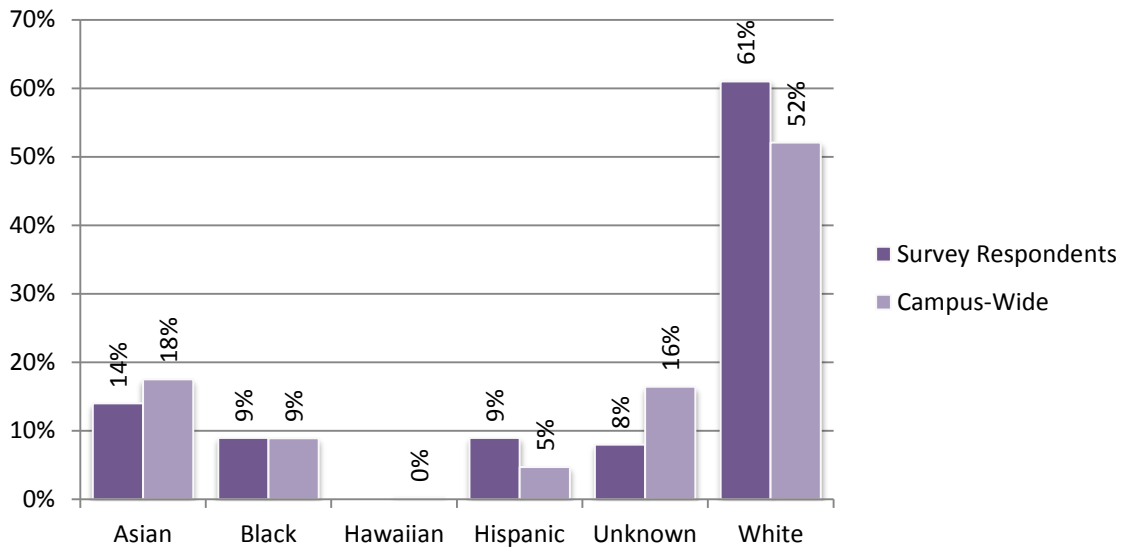


Figure 4. Race / Ethnicity Breakdowns of Survey Respondents vs. Total Campus Population of Assistant Professors

Tenure-track faculty are generally reviewed for promotion and tenure in their sixth or seventh year of appointment at the University; ten percent (n=11) of survey

respondents had been employed for six or seven years, but half (n=51) of survey respondents had been at the University two years or less.

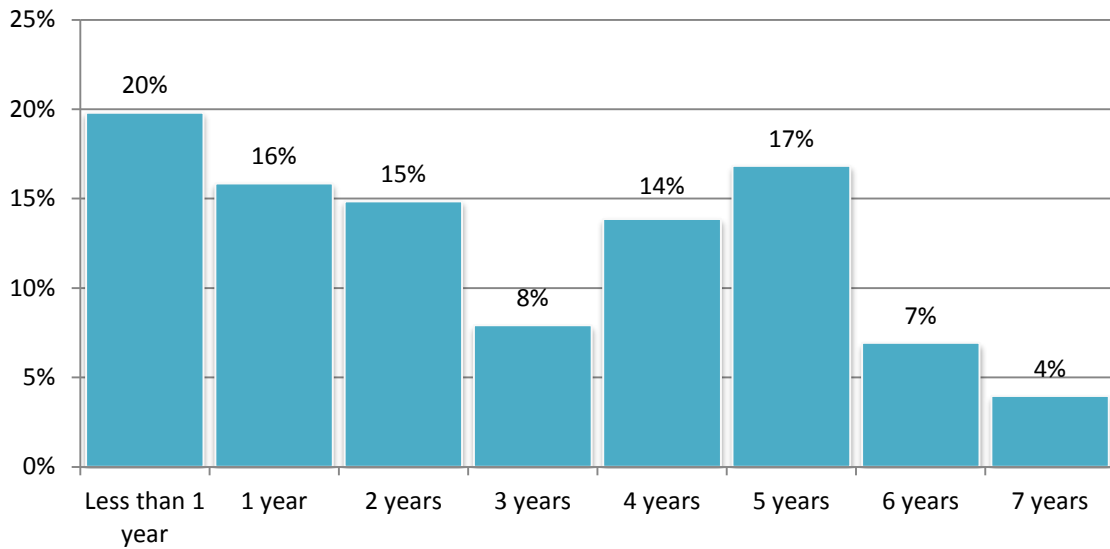


Figure 5. Frequency Distribution of Survey Respondents Based on their Length of Employment (in number of years) as faculty with the University

By university policy, tenure-track faculty are assigned a mentor during their first semester of appointment. However, as time passes, mentors are reassigned according to their fit with the faculty they are mentoring. Forty-four percent (n=42) of survey respondents have known their mentor for two years or less.

Interview Participants

Thirty survey respondents (29%) volunteered to be interviewed; 18 were selected using purposive sampling and contacted to make further arrangements for the interview, but only ten responded. One of those ten later declined, so nine interviews (representing 9% of the survey sample) were conducted. In this group of nine, the male to female ratio was 7:2; one group member was African-American, and two were Hispanic, so as a group, the sample of interviewees is not representative of the larger campus population of

assistant professors. Two of the interview participants were being evaluated for tenure during the semester that they were interviewed. Two interview participants were in their first year of appointment at the university; the remainder had one to three years of experience.

In the section that follows, I will summarize the study findings, organized by the research questions. Data from the survey and the interviews is thus organized thematically, rather than according to some other scheme.

RQ1: How do people share information within the context of their mentoring relationship?

Information sharing between mentor and mentee seems to be facilitated by communication tools like email and texting, but there is also an emphasis on meeting face to face. Mentors and mentees exchange information in office meetings, but also in social environments, such as over lunch, coffee, or in a bar. One interviewee stated:

I think every other week on a Friday we go have a beer at Mulligan's, so we can talk about less formal things, and complain about things too. It's important to have someone to complain to, even if some complaints may not be legitimate, sometimes you have to let off steam. And he's a person I do that with. (I-085)

I-074 has several email exchanges a day with his mentor, so they don't spend a lot of time meeting face to face, though they do occasionally see each other at conferences or go out to dinner. Another interviewee (I-018) sits on committees with his mentor, so they might start out by talking of committee business, but end up talking about issues of mentoring. Mentors and mentees also drop in on one another, though it requires more forethought when the mentor works on another floor or in another building. As I-096, whose mentor is located in another building, said "We're a small department in three

buildings, so it's not quite the same as just walking down the hall." I-085's mentor has an office just across the hall, so they meet frequently, but for shorter periods of time. Among survey respondents, only 14% (n=12) said their meetings were initiated by their mentor; 40% (n=35) initiated the meetings themselves, and almost half (n=42) said that both they and their mentors initiated meetings, which suggests flexibility in information sharing.

The agenda for these mentoring meetings tends to be informal, which gives the mentee flexibility to talk about whatever is a priority. As I-021 said, "It's just sort of stream of consciousness – whatever comes up. She [mentor] seems to be fine with not having a specific agenda." I-067 said, "That informality is nice because it ... did allow me to say what was on my mind or bring up whatever questions I had." Two interviewees (I-040, I-021) described a process of adding to a list of questions for the mentor and setting up a meeting when the list grew long enough. Others email their questions to the mentor one at a time. In contrast to this emphasis on informality from interviewees, seven responses to the survey question, "Is there anything you think the provost, the dean, or your chair could do to improve the quality of mentoring on the campus?" were focused on the benefits of a more formal mentoring program. One of the survey respondents (SR-011) suggested, "Establish more official and transparent guidelines." Eight respondents to this question suggested developing training programs for both mentors and mentees, so each could be aware of expectations.

Two-thirds (n=61) of the survey respondents have only one formally assigned mentor. Nineteen percent (n=18) have two formal mentors, and 13% (n=12) have three. However, survey respondents who have only one formally assigned mentor are more likely to have informal mentors. Respondents with only one formally assigned mentor

make up more than half of respondents who indicated any informal mentors. In other words, if survey respondents had only one formally assigned mentor, they were more likely to have informal mentors, while those respondents with more than one formally assigned mentor were less likely to have an informal mentor. Three of the interviewees emphasized that it was important to be proactive in looking for information, seeking out their mentors, or finding other people to help mentor them. Other survey respondents commented that junior faculty needed a way to meet potential mentors who were not necessarily in the same department. Junior faculty do tend to seek information from multiple sources; three-quarters (n=78) of survey respondents ask their peers for information regarding their faculty position, and 60 percent (n=62) ask their peers in addition to asking their mentors.

RQ2: What motivates people to look for information within the context of the mentoring relationship?

Mentees look to their mentor for information because they recognize in themselves a knowledge gap. The mentor is recognized as having expertise in areas that are unfamiliar to the mentee, or expertise with individuals or groups where the mentee is less experienced. Survey respondents suggested that the mentor is there to provide guidance for the mentee. Particularly emphasized was the idea of learning from the experience of others; mentors were described as experienced in the context of the institution, in navigating departmental expectations, in providing constructive criticism, and in developing long-range goals for research.

Several of the study participants – both survey respondents and interviewees – commented that graduate school doesn't necessarily prepare one to be a faculty member. I-096 commented about the experience of designing a course, "You start teaching it, and

then you're like 'is this important?' You know? Because there's no book that tells you it is, so you have to kind of just... how do you decide what's important to keep and what's not?" I-018 said, "In grad school, you get very good at doing research, but there's a lot more to being a professor than just doing research." He added:

It's really nice to have people to talk to who sort of help guide you through these different things that you don't have experience with from your education... I feel like the ideal case would be you have both a place to go for immediate feedback, sort of week to week things, personnel management, writing grants, things like that, and then also somewhere to go for the bigger picture discussions, like where is my research headed in a five-year timespan?

I-085 commented that his mentor is always in the lab, stating "He gives me advice on a lot of different things – not just on the research, but also how to set up a lab, how to recruit students, teaching."

Mentees primarily seek information about the tenure process from their mentors. Every interviewee mentioned getting tenure information from his or her mentor, and tenure was mentioned 23 times in response to open-ended questions such as, "What do you think is the value of a mentoring relationship, if any?" and "What are the major ways that your mentor helps you?" In particular, survey respondents listed "guidance on tenure" (SR-001), "guidance toward tenure" (SR-011), "I think it's supposed to help guide us through the tenure process" (SR-007), and "helping to understand the tenure process better" (SR-018). I-018 said, "When I'm looking for tenure information, he's very helpful." I-021 said, "We talk a lot about the tenure process," and went on to comment, "There's not a day that I don't panic about tenure." I-035 said she seeks out her

mentor “when I need advice about a tenure question.” I-040 commented, “I think the most challenging part of the tenure process is it’s sort of self-directed and open, and yet it’s not.” She added that she relies on her mentor to help her navigate her tenure questions. I-074 said about tenure, “That absolutely is an area where she [mentor] has provided excellent guidance and advice.”

Junior faculty seem less inclined to ask mentors for information about research, except with regard to technical aspects like grant writing or reimbursement. There is a tension between getting support from a mentor and remaining an independent researcher. I-021 said, “If it’s a research question, I don’t often go to her because again we have different areas of expertise.” On the other hand, I-074 said, “We have different research interests that overlap in a couple of places, which is how we’ve ended up as co-authors.” I-085 said, “I think he sees his role as just making sure that I get up and started in a way that makes me an independent researcher. I’m not dependent on him for anything, and we’re not collaborating on research or anything.”

Mentees do seem to seek information from their mentors about teaching, though interviewees commented primarily on their questions about teaching evaluations by students and by peers. Both kinds of evaluation are included in the tenure dossier. I-021 said, “She offered to do my first evaluation and so I’ve taken her up on that.” I-040 said, “She’s watched my classes. She has a wonderful eye. She’ll have good observations about the students.” Another interviewee commented:

We’re not an institution that rewards teaching very much for tenured faculty, and that’s different than a mentoring issue, but it’s not different at the same time,

because actually a lot of focus is paid – in mentoring – to your most recent crop of teaching evaluations. (I-067)

However, this interviewee also commented, “Usually that kind of advice would just happen in the hallway in passing... [student] evaluations are often a moment which mentoring happens around, for good or for bad.” I-074 said, “This is my first teaching job. I was really pretty clueless about much of what I needed to know.” Teaching was mentioned as something that mentors help with seven times in open-response questions on the survey. Both interviewees and survey respondents also commented that mentors help with questions about graduate students, and with questions about departmental politics.

Ultimately, as noted above, the interviewees tend to perceive their mentors as available to answer questions. I-085 said, “I think in the beginning, it feels pretty lonely and if someone isn’t there to guide you along – someone you know that went through the whole process and succeeded – I think that’s what leads to a lot of stress to new assistant professors.” On the other hand, I-008 characterized mentoring on campus as “throwing the little birdie out of the nest.” However, he also said, “As a junior faculty member, we recognize that there are certain things – that are expected of us – and we often don’t know what to ask for in order to meet those expectations. That’s where the mentorship component really becomes important.” Ideally, the mentor can help the mentee develop a network of colleagues and acquaintances who offer much needed support.

RQ3: What are the barriers to information seeking within the context of the mentoring relationship?

Barriers to information seeking in the mentoring relationship are present when no formal mentor has been assigned, as implied by interviewees and survey respondents.

The extent to which the mentor is perceived as too busy also has an effect on information seeking, as do other elements of the relationship between mentor and mentee. Some mentees (e.g., I-067, SR-068) are constrained by the idea that their mentors will vote on their tenure cases. Others are challenged by the fact that their mentors are in different research areas (e.g., I-035, SR-030) or use different methodologies (e.g., I-021). Some (e.g., I-035, SR-045) find their mentors unavailable, or have personality conflicts with their mentors. However, none of the interviewees were able to identify any topics they wouldn't want to discuss with their mentors, which seems to suggest a more open relationship. Forty-five percent (n=42) of *survey respondents*, on the other hand, said there were questions they wouldn't want to ask a mentor, and a quarter (n=25) listed topics they wouldn't want to discuss with mentors. Almost half of those listing a topic that they wouldn't want to discuss with a mentor included family or personal issues among those topics, which seems to indicate that mentees feel some distinction between personal issues and work issues. This creates an added challenge in that the mentee's work may often be affected by personal issues.

Several of the study participants defined their mentor's role as being available to answer questions. They often characterized their questions as "stupid things," listing personnel management (I-018), travel reimbursement (I-085), and copy paper (I-021) as examples. These participants all described their relationships with their mentors in positive – not to say glowing – terms, and yet they still felt some embarrassment about some of the questions they asked, despite the fact that their questions were definitely valid. For a mentee without a strong mentoring relationship, or a mentee with no assigned mentor, one imagines the constraint against asking such technical or logistical questions

would be much stronger, forming a real barrier to information seeking. Three survey respondents (SR-013, SR-008, and SR-064) commented that they had not been assigned any mentor, and others (SR-002, SR-095, SR-045) noted that they did not receive mentoring from their “mentors”.

Another barrier to information seeking could be created by the mentor’s availability. Among survey respondents, 28% (n=27) answered “neutral” (13%; n=13), “somewhat not” (8%; n=8), or “not at all” (6%; n=6) to the question “How satisfied have you been with your mentor’s availability?” I-035 noted, “The difficulty is in getting a quick response.” I-018 described a situation where he was more likely to ask questions of his informal mentors than of his assigned mentor, though he acknowledged that this might have as much to do with his and his mentor’s personality as with his mentor’s availability.

Mentees are also constrained when they are dissatisfied by the quality of the mentor’s advice or feedback. Twenty-six percent (n=25) of survey respondents answered “neutral” (13%, n=13), “somewhat not” (7%, n=7), or “not at all” (5%, n=5) to the question “How satisfied have you been with the quality of your mentor’s advice or feedback?” One of the interviewees (I-035) described a situation where she perceived her mentor didn’t understand the work she was doing, and thus offered advice about a grant opportunity that was inappropriate. One of the survey respondents (SR-097) commented “Not everyone is a good mentor. It takes someone extraordinary to really develop a valuable mentoring relationship.” While this is clearly a comment on the mentoring relationship, it also speaks to the mentee’s perception of the quality of advice or feedback received. Another survey respondent (SR-045) said, “Formal requirements are conveyed,

and as I come up for tenure I'm given scary yet vague feedback, but there has been absolutely zero attempt to provide useful mentoring over the years." SR-052 recommends appointing a mentor of similar age or associate-level rank because senior faculty members, having gone through the tenure process in a very different climate, "aren't particularly helpful in supporting and protecting junior faculty as they approach tenure." This respondent went on to say these senior faculty might be more a part of the problem than a part of the solution: "Their knowledge of department and university dynamics is valuable in some ways, but they are not necessarily attuned to the immense pressures junior faculty experience in the context of current trends in higher education."

Another barrier for mentees in seeking information becomes evident when the mentor is busy. Five of the interviewees (I-040, I-021, I-018, I-074, I-067) mentioned that their mentors were extremely busy, implying that was a barrier to information seeking. I-040 said she tried to minimize the questions she asked her mentor during the time that her mentor had a school-wide responsibility. A survey respondent (SR-078) commented, "One potential barrier to mentoring arises when junior faculty feel guilty about asking for their mentor to devote time and energy to them." I-067 said "Definitely it's the case that all of us feel busy and are busy, so it can be difficult to find some time." As another survey respondent (SR-040) said, "My mentor's workload in the past two years, particularly this semester, has caused her to be less available to me. Allowing senior faculty more room in their schedules for more mentoring time would be helpful."

Several interviewees (I-067, I-018, I-074) and survey respondents (SR-045, SR-068) commented that they knew their mentors would be voting on them for tenure, and that had an impact on the kinds of questions they asked or comments they made. I-067

said, “I was also aware that at some point, they would be voting on me for tenure... so it might be hard at some times to be completely candid.” One of the survey respondents (SR-068) said, “My mentor seems to view her primary role as that of evaluating me for the department, so I pose questions carefully.” Another interviewee (I-021) commented that communications with the mentor were protected, that his perception was that his mentor could not repeat his questions or comments to the tenure committee. One might take that to mean the mentee would not be as free with his mentor if he knew that wasn’t the case.

Figure 6 is a visual depiction of the barriers participating mentees described facing in the mentoring relationship, including availability – whether of the formal mentor, the informal mentor, or the peer – affective barriers, such as concern over how ones’ questions might sound, or fear that the mentor might take the question in the wrong way; time constraints, in which either the mentor or the mentee is too busy to find the time to meet; and questions of information quality, such as dissatisfaction with the mentor’s advice or feedback. In the figure, the barriers are represented in the order they are likely to develop.

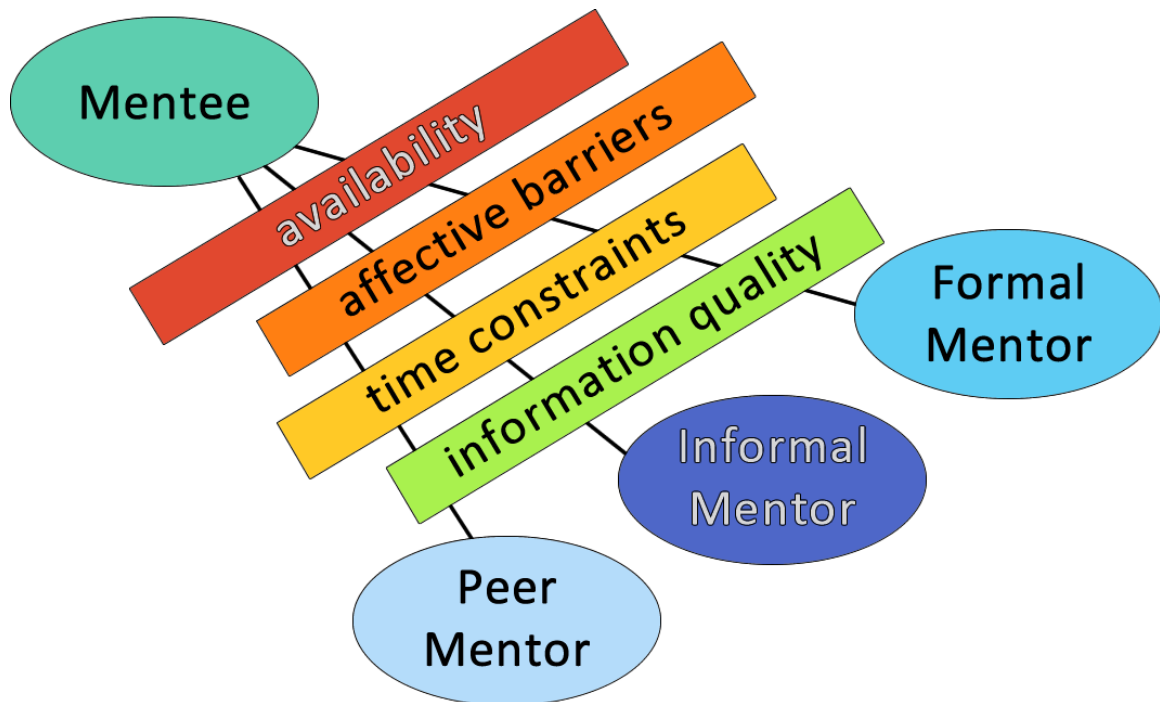


Figure 6. Barriers to information seeking in the mentoring relationship.

RQ4: What makes for a successful mentoring relationship?

The successful mentoring relationship is a product of many things, but perhaps most important is the mentor's personality and the common experiences that he or she may share with the mentee. Mentees themselves, in response to the survey, indicated that having a mentor of similar or different gender, race, and age was "somewhat important" or "very important" at a rate of between 35% and 45%, thus suggesting that many mentees look for mentors who are like them. One survey respondent (SR-028) commented, "I would love to have a female mentor, but know that this is not always possible." Another (SR-078) commented, "It is discouraging when women are not represented at all among the senior faculty... I think it is important to have role models that are similar in gender..., even if those role models are not mentors." Most people want to seek information from people who are like them (Abrahamson, Fisher, Turner, Durrance, & Turner, 2008; Blickle et al., 2010; Harris, 2003), and junior faculty in

mentoring relationships are no different. Personality also has an impact. I-067 said, “These are people who I respect, have a lot of affection for, who I always sense were on my side.”

It seems it also adds to the success of the relationship when the mentee is proactive about seeking mentoring. I-018 said, “I think that every faculty member that has either been an official or unofficial mentor for me has been great when I need them, but it really requires proactivity on my part.” I-035 said, “You have to initiate getting mentoring information yourself.” I-008 said, “You would need to be proactive in getting the resources that you need.”

Finally, the mentor needs to be available to the mentee. One interviewee said:

I think that the main thing is that by having his name written down as my mentor, I could feel unabashed about going and asking him something, whereas for other people maybe I would feel less comfortable. There’s sort of this contract that he has to answer my questions if I ask them. (I-018)

One of the survey respondents (SR-049) commented that the mentor should be “available for advice and support.”

Survey respondents were also asked to list five adjectives that describe a successful mentoring relationship. More than three quarters (n=79; 78%) of survey respondents listed at least one adjective, with most of those respondents filling in all five blanks provided. The adjectives were exported to a text file and then scrubbed to correct for spelling errors. The adjectives were reviewed a second time and some were modified to collapse with others (e.g., “commitment” was merged with “committed”) and the resulting list was uploaded to the Tagxedo word cloud generator site

Discussion

Though mentoring has been considered an important element of orientation and professional development for several decades now, it has never been studied from the perspective of information behavior theory. In a viable and effective mentoring relationship, mentors and mentees are constantly exchanging information, and by considering what barriers there may be to that information flow, we may identify some best practices for mentoring programs on university campuses. Though they derive from a somewhat restricted sample, the findings detailed above are encouraging in what they say about the value of mentoring for junior faculty members, and the kinds of information those faculty members seek from their mentors.

This study has investigated the information behavior of tenure-track faculty members in their relationships with their mentors. Through the study, aspects of mentee information behavior have been identified, as have some of the barriers to information seeking that they encounter. Finally, the study has identified what mentees think can help to facilitate their relationships and information exchange with their mentors.

The findings from this study represent the first examination of the mentoring relationship from the perspective of information behavior. Overall, they support the initially proposed model in which the mentee's information seeking may ideally be compared with browsing, as well as being related to berrypicking (Bates, 1989) and information patch (Pirolli & Card, 1999) models, which acknowledge the contextual nature of information need, and the way that need evolves over time. As initially proposed, junior faculty are constrained in their information seeking by various affective barriers, and the findings from this study confirm those barriers exist.

Central findings.

Information sharing in mentoring relationships is facilitated by email and other asynchronous communication, but the complexity of the information needs means there are benefits to face to face meetings. Mentees seem likely to initiate meetings, or meetings may be initiated by either the mentor or the mentee, indicating that the relationship is both informal and flexible. Study participants seemed to agree that it is important for the mentee to be proactive in information seeking, and indeed in seeking out mentoring. The idea that mentees should play a role in choosing their mentors supports the conclusions of Allen et al. (2006), Carey & Weissman (2010), and Sorcinelli & Yun (2007).

Barriers to information seeking are present when no formal mentor has been assigned, or when the formal mentor is not available to the mentee, whether because of other responsibilities or because of personality conflicts, and the mentee has not been able to develop informal mentoring contacts, as suggested by Blickle et al (2010) and Stanley & Lincoln (2005). Mentees are also constrained in their information seeking by the knowledge that their mentors will be voting on their tenure cases. Other barriers arise when mentee and mentor use different research methodologies, or do research in areas that are too close together, or too far apart. All these barriers to information seeking may be considered as affective, as defined by Nahl (2005).

Study participants did indicate that their mentors were valuable for their expertise, either in unfamiliar areas, such as grant or fellowship applications, or with individuals or groups where the mentee is less experienced, such as at points of department conflict. Mentees value the mentor because he or she is familiar with the institution, can navigate departmental expectations, and provide constructive criticism in a context that feels safe

to the mentee, all elements noted by Thurston (2009). Mentees also look for information in mentoring because they may feel isolated.

Ultimately, the successful mentoring relationship is a product of many elements, including the mentor's personality, and the common experiences he or she may share with the mentee. However, the mentee's willingness to be proactive in seeking out mentoring is also important. Also, the mentor must be available to the mentee.

Information seeking in the mentoring relationship may be considered using models that are more commonly applied to an individual's query for a document or other information source. In the context of this study, the mentor is a repository for information of many kinds, including career and psychosocial dimensions (Kram, 1985). The mentee is constrained by the bounds of his or her small world, to the extent that little is known of research or projects outside the department. Because of the exigencies of teaching, recruiting graduate students, applying for grants, and developing research programs, the mentee has little freedom to look for information on how to accomplish all these tasks; the mentor must serve as the library shelf.

Unfortunately, there are several challenges associated with such an information source. Mentor and mentee are increasingly busy people, leading to an increased reliance on email as a means of sharing information. However, by its nature, email constrains the mentee's ability to browse and berrypick through the mentor's expertise. When the relationship is constantly under pressure from lack of time, the mentee will never be able to enter the invitational mood in information seeking. Further, the mentee may be reluctant to ask the necessary questions of his or her mentor, feeling the questions are

about “stupid things.” This reluctance, perhaps a form of library anxiety, will prevent the mentee from satisfying his or her information needs.

Limitations.

This study has some limitations due to the research design and the specific methods employed. The study is attempting to describe a relationship – contextual, fluid – from the evaluation of a single point in time. Additionally, the study examines only one side of the relationship, and thus is incomplete.

The survey sample was drawn exclusively from the population of assistant professors at one university, and so the sample is not truly random. Furthermore, purposive sampling was used to select interviewees. The small sample size of the interviewees resulted in a lack of generalizability.

These two samples – faculty willing to complete the survey online and faculty willing to be interviewed – are subject to bias in several forms. Some faculty responded to the survey invitation with a comment that suggested they feared their responses would not be kept confidential. Faculty who participated in the interviews were far more likely to report feeling positively about their mentoring relationship than they were to respond negatively (7 (78%) interviewees reported overall positive feelings, 2 (22%) reported somewhat negative feelings), in contrast to the survey respondents who were more inclined to be neutral (n=49; 48%) or completely negative (n=9; 9%). Responses may also be biased because 58% of survey respondents were in the first three years of their appointment. Another source of bias may be that the survey invitation was only publicized through email, and by the fact that a paper survey was not available. Finally, this sample of tenure-track faculty is different in gender and racial make-up from the population of faculty at large.

Further, validity may have been affected by the involvement of the Office of Faculty Affairs, which supervises the campus Appointment, Promotion, and Tenure process as well as overseeing some aspects of faculty mentoring. Faculty members with negative experiences to report may have remained silent for fear of the consequences of their honesty. Faculty members who have had positive experiences of mentoring may have responded in unrepresentative numbers, simply because their experience was positive.

Conclusion

The findings of this study appear to confirm that one may develop fruitful insights after examining the mentoring relationship from the perspective of information behavior theory. It is these insights that lead to better mentoring programs.

Practical implications.

The findings from this study demonstrate that information transfer between mentor and mentee is vastly improved when there is a positive relationship between the two. In order to develop that relationship, a certain amount of time must be committed to the mentoring process – and much of that time must be spent in face to face meetings. Mentor and mentee need not be friends, but they must be comfortable acquaintances in order to freely transfer information. For mentees, this means committing the time to meet and not relying on email to ask every question. For mentors, this means being available when the mentee initiates a meeting, and scheduling at least one meeting per semester. For administration, this means that mentors must be given some release from other duties, in order to make time for mentoring.

Another way to facilitate the relationship between mentor and mentee is to consult the assistant professor when selecting mentors. Also, the assistant professor should be

assigned two or three mentors, rather than just one. If the junior faculty member needs a lot of help in getting started, the burden doesn't fall entirely on one individual.

Administrators should organize different levels of mentoring. The assistant professor in his first year of appointment is likely to need more support than the assistant professor who has just completed his third-year review.

Administrators should develop training for both mentors and mentees, so that each knows what to expect and what is expected. For mentees, training should include strategies for being proactive in pursuit of mentoring. For mentors, this training should include suggestions of elements to address during mentoring sessions. In addition, the administration should develop support systems for mentors, including release time and some means of identifying mentors who are interested in working with mentees from other departments. The administration should develop a system to be sure that each assistant professor has an assigned mentor.

The table below summarizes the recommendations for improving mentoring programs.

Table 1. Recommendations to Administrators and Mentees/ Mentors for Improving Mentoring.

Administrators	Provide training for mentors and mentees
	Create multi-level mentoring programs
	Consult with assistant professors on mentor assignments
	Assign multiple mentors to each assistant professor
Mentees / Mentors	Commit to make time for mentoring
	Hold face to face meetings whenever possible

Suggestions for future research.

Additional statistical analysis will be done on the survey responses to investigate possible correlation between demographics (such as gender and length of time at the university) and mentoring variables. A test of associations between college affiliation and open-ended responses which suggest barriers to information seeking in mentoring is also planned.

In the immediate future, additional research is planned to survey the professors who serve as mentors. The present study evaluates the mentoring relationship only from the perspective of the mentee. However, mentors are also likely to have information needs and perhaps to encounter barriers in their information seeking.

More research is needed to determine what role gender plays in information seeking behavior in the mentoring relationship. There were significant differences between the proportions of men (44%) and women (56%) responding to the survey and volunteering to be interviewed (77% men, 23% women). Further inquiry into the degree to which junior faculty continue to rely on informal mentoring from their graduate school experience is also planned. A related inquiry is a longitudinal study of how information behavior changes over time in the mentoring relationship.

In addition, the survey instrument and interview script have never been used before. It would be of interest to test their reliability on some other college campus. Finally, it would also be of interest to find out more about what kinds of information mentees and mentors seek, and to discover their attitudes about the best ways that information could be delivered.

Concluding remarks.

Every day's newspaper, every week's *Chronicle*, or *Inside Higher Ed*, brings another story about the problems with the university system and the changes that are coming to college campuses in the next decade. We can see the harbingers of change with public interest in MOOCs and other forms of distance learning. It is this cohort of assistant professors who will likely be in administrative positions by the time these changes reach the campus. These assistant professors will be guiding universities into their next form, whether that is as expensive trade schools; as ivory towers, where nutty professors live the lives of funny novels; or as keepers of the flame of inquiry, perhaps funded by capitalism, but in no way serving capitalism. The good mentoring these assistant professors receive now will ensure that more of them are in a position to think creatively about the future of the twenty-first century university.

Appendix A: Survey Invitation Email

Dear Faculty Member,

I am writing to ask you to participate in an important survey about the mentoring of tenure-track faculty at the University of . Mentoring is an important means of support for new faculty, but little is known about the characteristics of a successful mentoring relationship, or how best to foster one. Through the Office of Faculty Affairs, I am conducting a study of mentoring practices at the University of , with a particular focus on information-related aspects of the mentoring relationship, such as the requesting, sharing, and providing of information. As a tenure-track faculty member, you have valuable insights about mentoring on campus. Please share your experience by completing a brief survey. The survey should take no more than 15 minutes. Your participation is greatly appreciated and your responses will be kept completely confidential. If you are an employee or student, your employment status or academic standing at will not be affected by your participation or non-participation in this study. The data collected will be used in aggregate by the Office of Faculty Affairs to support mentoring best practices on campus, and will form the foundation of my master's thesis. Upon submitting your survey responses, you will be invited to sign up for a brief follow-up interview.

Please click [here](#) to begin the survey, and thank you very much for your participation.

If you have any questions, please feel free to contact me.

Rebecca Follman
MLS Candidate, College of Information Studies
Graduate Assistant,
Office of Faculty Affairs
[author's contact information]

Appendix B: Interview Sign-Up Web Form

Thank you for completing the survey.

Survey ID: 0014

Would you be willing to be interviewed further about your mentoring relationship? Interviews are expected to take between half an hour and forty-five minutes. Complete the form below if you are willing to be interviewed.

Name:	<input type="text"/>
Email:	<input type="text"/>
Best phone #:	<input type="text"/>
Survey ID:	<input type="text"/> Entering your survey ID, which appears at the top right of this screen, will enable me to review your survey answers before we meet.
<input type="submit" value="SUBMIT"/>	

Thank you very much for helping with this study.

Best regards, Rebecca Follman

Please **click here to return to the consent form** and print a copy for your records.

Appendix C: Survey

Thank you for completing this survey. Your responses will be used to develop recommendations for improving mentoring on campus. You may skip any question that you don't wish to answer, and if you want to stop taking the survey at any time, simply close your browser window. Your responses will not be saved unless you click the Submit button at the bottom of the page. If you have any questions or concerns about the survey, please contact me, Rebecca Follman, at 301-405-0665 or by email at rfollman@umd.edu.

Please respond by December 21, 2012.

Information About Yourself

1. Age
2. Gender
 - a. Male
 - b. Female
3. Race / Ethnicity
 - a. White
 - b. Black / African American
 - c. Hispanic / Latino
 - d. Native American
 - e. Asian / Pacific Islander
 - f. Other
4. Citizenship
 - a. US
 - b. Other
5. Marital Status
 - a. Married
 - b. Single
 - c. Partnered
6. Are you a parent?
 - a. Yes
 - b. No
7. Education level of your parents
 - a. High school diploma
 - b. Some college
 - c. Associate degree
 - d. 4 year degree
 - e. Graduate degree
 - f. Other degree

- 8. What is your primary department?
 - a. Prefer not to say
 - b. [Choose from a comprehensive list of university departments]
- 9. How long have you been employed at the University in your current position?
 - a. Less than 1 year
 - b. 1 year
 - c. 2 years
 - d. 3 years
 - e. 4 years
 - f. 5 years
 - g. 6 years
 - h. 7 years
- 10. Please rate your confidence level as a faculty member:

Very confident	somewhat confident	neutral	somewhat unconfident	very unconfident
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- 11. Do you feel your confidence level has increased or decreased across your time at the University?

Much increased	Somewhat increased	Neutral	Somewhat decreased	Much decreased
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Information about mentoring in general

- 12. Have you had a mentor in the past? What was the context?
 - a. I have not had a mentor
 - b. Undergraduate
 - c. Graduate
 - d. Postdoctoral
 - e. Other employment
- 13. Have you served as a mentor in the past? What was the context?
 - a. I have not had a mentor
 - b. Undergraduate
 - c. Graduate
 - d. Postdoctoral
 - e. Other employment
- 14. What are five adjectives that describe a successful mentoring relationship?
- 15. What do you think is the value of a mentoring relationship, if any?
- 16. Generally speaking, how important to the mentoring relationship are similarities or differences in age, gender, and/or race?

Very important	Somewhat important	Neutral	Somewhat unimportant	Very unimportant
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Information about the mentors you currently have

17. How many formally assigned mentors do you have?
 - a. One
 - b. Two
 - c. Three
 - d. More than three
18. How long have you known your mentor?
 - a. Less than a year
 - b. One to two years
 - c. Three to five years
 - d. More than five years
19. How long has this person been your mentor?
 - a. Less than a year
 - b. One to two years
 - c. Three to five years
 - d. More than five years
20. How many informal mentors would you say that you have?
 - a. None; they are all formally assigned
 - b. One or two
 - c. Three or four
 - d. Five or more
21. Do you ever participate in group mentoring?
 - a. Yes
 - b. No
22. How was your relationship with your mentor initiated?
 - a. I initiated the mentoring relationship
 - b. My department chair assigned this mentor to me
 - c. My department chair introduced us
 - d. Another faculty member introduced us
 - e. Other
23. Are any of your mentors from outside your department?
 - a. Yes
 - b. No
24. How often do you meet with your mentor?
 - a. More than once a week
 - b. Weekly

- c. A few times a month
 - d. Monthly
 - e. Less than once a month
25. How many times have you met with your mentor so far this semester?
- a. 1-10 times
 - b. Never
26. Do you ever drop in on your mentor, or does your mentor drop in on you?
- a. I drop in on my mentor
 - b. My mentor drops in on me
 - c. We both drop in on each other
 - d. We never drop in on each other
27. Do you tend to initiate meetings, or does your mentor?
- a. I do
 - b. My mentor does
 - c. We both do
28. How satisfied have you been with your mentor's availability?

Very	Somewhat	Neutral	Somewhat not	Not at all
------	----------	---------	--------------	------------

Information about your relationship with your mentor

29. How satisfied have you been with your mentor's willingness to give you information, such as advice or feedback?

Very	Somewhat	Neutral	Somewhat not	Not at all
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30. How satisfied have you been with the quality of your mentor's advice or feedback?

Very	Somewhat	Neutral	Somewhat not	Not at all
------	----------	---------	--------------	------------

31. How comfortable do you feel asking your mentor questions?

Very	Somewhat	Neutral	Somewhat not	Not at all
------	----------	---------	--------------	------------

32. How knowledgeable have you found your mentor?

Very	Somewhat	Neutral	Somewhat not	Not at all
------	----------	---------	--------------	------------

33. Would you consider your mentor to be a friend and / or a role model (check all that apply)?

- a. Friend

- b. Role model
- c. Neither
- d. Other? _____

34. Do you feel comfortable disagreeing with your mentor?

Very	Somewhat	Neutral	Somewhat not	Not at all
------	----------	---------	--------------	------------

35. Are there any questions you wouldn't want to ask your mentor?
- a. Yes
 - b. No
 - i. If yes, what kind of topics? _____
36. What are the major ways that your mentor helps you?
37. Is there anything you think the provost, the dean, or your chair could do to improve the quality of mentoring on the campus?

Other sources of information

38. How often do you ask a peer for information regarding your position as a faculty member?
- a. Never
 - b. Rarely
 - c. Occasionally
 - d. Frequently
39. Do you tend to check with peers in addition to asking your mentor or in lieu of asking your mentor?
- a. In addition to
 - b. In lieu of
40. How often do you look for information regarding your position as a faculty member through a discussion forum or other social media site?
- a. Never
 - b. Rarely
 - c. Occasionally
 - d. Frequently
41. Do you tend to look online in addition to asking your mentor or in lieu of asking your mentor?
- a. In addition to
 - b. In lieu of
42. Do you belong to any listservs for junior faculty?
- a. Yes
 - b. No
 - i. If yes, could you list one or two?

43. How often do you talk with non-university people about your successes and / or challenges in the work you're doing on campus?
- a. Never
 - b. Rarely
 - c. Occasionally
 - d. Frequently

Screen Capture of the Survey

MENTORING
Office of
FACULTY AFFAIRS

SURVEY

Faculty Survey

Thank you for completing this survey. Your responses will be used to develop recommendations for improving mentoring on campus. You may skip any question that you don't wish to answer, and if you want to stop taking the survey at any time, simply close your browser window. Your responses will not be saved unless you click the Submit button at the bottom of the page. If you have any questions or concerns about the survey, please contact me, Rebecca Follman, at 301-405-0665 or by email at rfollman@umd.edu.

Please respond by December 21, 2012.

Information About Yourself

Age	<input type="text"/>	Gender	Male <input type="radio"/> Female <input type="radio"/>
Race / Ethnicity	<input type="text"/>	Citizenship	US <input type="radio"/> Other <input type="radio"/>
Marital Status	Married <input type="radio"/> Single <input type="radio"/> Partnered <input type="radio"/>	Are you a parent?	Yes <input type="radio"/> No <input type="radio"/>
Education level of your parents	<input type="text"/>		
What is your primary department?	<input type="text"/>		
How long have you been employed at the University in your current position?	<input type="text"/>		
Please rate your confidence level as a faculty member:	Very Confident	Somewhat Confident	Neutral
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel your confidence level has increased or decreased across your time at the University?	Much Increased	Somewhat Increased	Neutral
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Information about mentoring in general

1. Have you had a mentor in the past? What was the context?	<input type="text"/>																								
2. Have you served as a mentor in the past? What was the context?	<input type="text"/>																								
3. What are five adjectives that describe a successful mentoring relationship?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>																								
4. What do you think is the value of a mentoring relationship, if any?	<div style="border: 1px solid gray; height: 40px; width: 100%;"></div>																								
5. Generally speaking, how important to the mentoring relationship are similarities or differences in age, gender, and/or race?	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.7em;"> <tr> <td></td> <td style="text-align: center;">Very Important</td> <td style="text-align: center;">Somewhat Important</td> <td style="text-align: center;">Neutral</td> <td style="text-align: center;">Somewhat Unimportant</td> <td style="text-align: center;">Very Unimportant</td> </tr> <tr> <td>Age</td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td>Gender</td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td>Race</td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> </table>		Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant	Age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gender	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Race	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant																				
Age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																				
Gender	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																				
Race	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																				

Information about the mentors you currently have											
6. How many formally assigned mentors do you have?	<input type="text"/>										
If you have more than one mentor, please complete the rest of the survey with regard to the mentor you would call your primary mentor.											
7. How long have you known your mentor?	<input type="text"/>										
8. How long has this person been your mentor?	<input type="text"/>										
9. How many informal mentors would you say that you have?	<input type="text"/>										
10. Do you ever participate in group mentoring?	Yes <input type="radio"/> No <input type="radio"/>										
11. How was your relationship with your mentor initiated?	<input type="text"/>										
12. Are any of your mentors from outside your department?	Yes <input type="radio"/> No <input type="radio"/>										
13. How often do you meet with your mentor?	<input type="text"/>										
14. How many times have you met with your mentor so far this semester?	<input type="text"/>										
15. Do you ever drop in on your mentor, or does your mentor drop in on you?	<input type="text"/>										
16. Do you tend to initiate meetings, or does your mentor?	I do <input type="radio"/> My mentor does <input type="radio"/> We both do <input type="radio"/>										
17. How satisfied have you been with your mentor's availability?	<table border="1"> <thead> <tr> <th>Very</th> <th>Somewhat</th> <th>Neutral</th> <th>Somewhat Not</th> <th>Not at all</th> </tr> </thead> <tbody> <tr> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </tbody> </table>	Very	Somewhat	Neutral	Somewhat Not	Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Very	Somewhat	Neutral	Somewhat Not	Not at all							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>							

Information about your relationship with your mentor

	Very	Somewhat	Neutral	Somewhat Not	Not at all
18. How satisfied have you been with your mentor's willingness to give you information, such as advice or feedback?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. How satisfied have you been with the quality of your mentor's advice or feedback?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. How comfortable do you feel asking your mentor questions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. How knowledgeable have you found your mentor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Would you consider your mentor to be a friend and / or a role model (check all that apply)?	Friend <input type="checkbox"/>	Role model <input type="checkbox"/>	Neither <input type="checkbox"/>	Other? <input type="text"/>	
23. Do you feel comfortable disagreeing with your mentor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Are there any questions you wouldn't want to ask your mentor?	Yes <input type="radio"/>	No <input type="radio"/>	If yes, what kind of topics? <input type="text"/>		
25. What are the major ways that your mentor helps you?	<input type="text"/>				
26. Is there anything you think the provost, the dean, or your chair could do to improve the quality of mentoring on the campus?	<input type="text"/>				

Other sources of information

27. How often do you ask a peer for information regarding your position as a faculty member?	<input type="text"/>
28. Do you tend to check with peers in addition to asking your mentor or in lieu of asking your mentor?	In addition to <input type="radio"/> In lieu of <input type="radio"/>
29. How often do you look for information regarding your position as a faculty member through a discussion forum or other social media site?	<input type="text"/>
30. Do you tend to look online in addition to asking your mentor or in lieu of asking your mentor?	In addition to <input type="radio"/> In lieu of <input type="radio"/>
31. Do you belong to any listservs for junior faculty?	Yes <input type="radio"/> No <input type="radio"/> If yes, could you list one or two? <input type="text"/>
32. How often do you talk with non-university people about your successes and / or challenges in the work you're doing on campus?	<input type="text"/>

Appendix D: Interview Script

1. What are your thoughts about the mentoring process at the University? In your department?
2. What do you think about the mentoring you've received?
3. What do you see as your mentor's role?
4. How satisfied are you with your position here at the University?
5. How successful do you feel you have been as a faculty member?
6. Would you say that there are enough mentors in your department?
 - a. [If no] Why not?
7. Please describe the fit between you and your mentor.
8. Where do you meet your mentor? How long do the meetings last?
9. How would you describe the balance of power between you and your mentor?
10. Would you say that your mentor is supportive?
 - a. [If yes] Would you give an example?
11. What kinds of situations make you want to seek a meeting with your mentor?
12. Are there any types of situations that you are hesitant to discuss with your mentor?
13. What kinds of information do you seek from your mentor? Do you ever encounter difficulties in seeking information from your mentor? Could you describe such a situation?
14. What areas of expertise do you most value in your mentor?
15. Where does your mentor fit in relation to other types of information sources? When you're thinking about where to turn for information, how does your mentor fit into the landscape?
16. How would you say you benefit from meeting with your mentor? In what ways is he/she helpful to you? Is there any way he or she could be more helpful?
17. Do you tend to act on your mentor's advice? Why or why not?
18. What parts of your relationship with your mentor are working well? What parts need improvement?
19. Think of a time when you helped your mentor with something. Would you describe the circumstances?
20. Does any administrator follow up with you or your mentor to be sure you're meeting?

Appendix E: Thematic Coding Scheme

Advising	Not Free to Ask
Advocacy	Objective
Balance - General	Oversight
Balance of Power	Peer Mentoring
Barrier	Personality - Mentee
Budget	Personality - Mentor
Busy	Perspective
Chair	Physical Barrier
Collaboration	Pressure
Committee Work	Priorities
Confidence	Proactive
Department Atmosphere	Procedural Information
Department Politics	Publish
Discussion Topics	Recognition
Dyad	Relationship
Email Communication	Research
Evaluation	Resources
Expectations	Retention of Faculty
Expertise	Salary
Formality	Self-Image
Freedom to Ask	Socializing
Graduate Students	Solidarity
Grant Application Process	State of Mind
Guide	Structure
Independence	Subjective
Inequality	Teaching
Informality	Tenure
Institutional Knowledge	Training
Isolation	Trust
Lack of mentoring	Uncertainty
Meeting Frequency	Underrepresented Groups
Meeting Space	Unofficial Mentor
Mentoring - General	

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