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Conceptual Framework for Mentoring Doctoral Students

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ABSTRACT

In the research and professional literature, there are at least four lines of inquiry around mentoring: perceptions of successful mentoring in general, mentoring of doctoral dissertations in particular, mentoring specific to the online environment, and relative importance of mentoring behaviors. In each case, particular qualities that make for successful mentoring are identified and described but not coalesced into a conceptual model of mentoring. In examining this literature, the authors identified 94 mentor behaviors and characteristics of effective mentors, which were reduced for redundancies to 55. These were clustered into a conceptual model of mentoring with two domains, academic and psychosocial with four attributes in the academic domain (competence, availability, induction, and challenge) and three in the psychosocial domain (personal qualities, communication, and emotional support). The two domains and seven attributes of this model are described and discussed, outlining some of the implications of this model for further research.

KEYWORDS: Mentoring Doctoral Students, Mentoring Conceptual Model, Higher Education

INTRODUCTION

Doctoral education has a history of individual mentoring of students as a means of guiding them through their research, inducting them into the academic community, and often introducing them to professional networks and launching their academic career through a supportive and personal relationship (Anderson & Shore, 2008; Davis, 2007; Forehand, 2008; Hu, Thomas, & Lance, 2008, Paglis, Green, & Bauer, 2006). Both the research and professional literature provide an abundance of guidance and best practices around mentoring, but there does not exist a conceptual framework for mentoring doctoral students that can guide research on the topic. Further, with the advent of online doctoral programs, it is not known if traditional approaches to mentoring transfer adequately to the online environment.

The purpose of this literature review is to synthesize qualities of mentoring students from both the professional and research literature, and to develop from that synthesis a conceptual framework for mentoring doctoral students. In this case, the conceptual framework suggests an organizational structure to guide future research and practice. Each item in the framework is presented as a category of mentoring behaviors, and each category is described and differentiated from other categories. This framework serves as a map of options for further investigation, either as independent items (since some of the qualities emerge from anecdotal accounts, "best practices" hearsay, or research conducted in limited contexts such as mentoring in a specific discipline area), or as inter-related groups of items to be examined as clusters of factors with the potential of cumulative or combined effects. In this way, the conceptual

framework may offer a first step toward the development of a research-based theory of mentoring.

METHOD

Because the practice of professors and instructors is informed and developed by guidance from a number of sources, the literature considered in this project included current research as well as literature that might be considered in the genre of "best practices," editorials, and "thought" pieces. All the articles considered were post-2005 to capture the most current ideas, although much of this literature was built on earlier theoretical and research studies. With this broad sweep of literature to consider, the key terms "mentoring and higher education" were used to search Academic Search Complete Premier and the ProQuest Central databases. Again, this encompassed a wide spectrum of mentoring in higher education and included the mentoring that takes place during on-site residencies (e.g., for nurses, medical students, counselors, and teachers) and the mentoring of new university faculty members, both of which were excluded from this review. This left articles on mentoring current students in higher education programs. A few of these articles related to the mentoring of undergraduate students and were given only peripheral attention while the focus was on the mentoring of doctoral students. Most of the remaining articles were written in the context of the traditional university environment and draw on both faculty and student perceptions. The literature reviewed was not discipline-specific and, in general, the authors did not assume or find differences in mentoring needs and practices among disciplines. However, the framework will require testing across the range of different disciplines each with its own culture, history and tradition of mentoring, and post-graduation perspectives, and also in special settings such as those involving on-site training, clinics, and laboratories.

The articles identified for review were analyzed using Nvivo8 software. The initial review identified all instances of behaviors or actions of mentors purported to support student success. This yielded 94 items. Working together for consensus, the authors conducted a second review looking for redundancies and combining items that were seen to be repetitious, reducing the number of items to 55. In the third review, the researchers assigned the items into the two domains identified in the literature: the academic domain and the psychosocial domain. Then working independently, the researchers clustered the items under higher-level labels identified for the purposes of this framework as "attributes." The researchers then refined the clusters collaboratively and consensually. The clustering was determined inductively, with a view to being sure to include all of 55 behaviors that had been identified. This yielded four categories, labeled attributes, in the Academic Domain—Competence, Availability, Induction, and Challenge—and three categories in the Psychosocial Domain—Personal Qualities (of mentors), Communication, and Emotional Support.   This resulted in a conceptual framework for mentoring, summarized graphically in Figure 1.
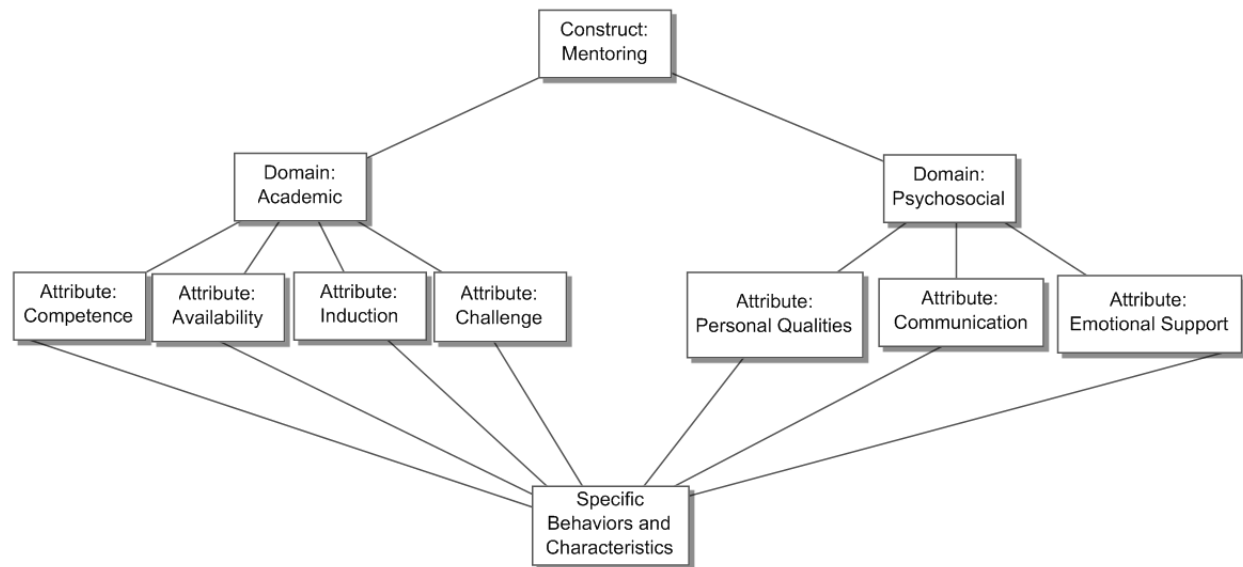
Figure 1: Conceptual framework for mentoring

RESEARCH REVIEW

Conceptions of mentoring in doctoral programs have been informed largely by practical advice, drawn from observation and experience, and research studies. Very little theoretical work has been developed around mentoring (Forehand, 2008) although it is generally accepted that mentoring is a key to graduate student success. There are at least four distinct lines of research on mentoring in the academic context. The first of these lines is the research around perceptions of mentoring. Among the accounts of student perceptions are several autobiographical records (e.g., Federoff, 2008; Suh, 2008). These studies are finely nuanced, and, while they provide some insights into the factors these mentees see as positive aspects of mentoring, the factors might be too idiosyncratic to lend themselves to generalization, and the accounts may be somewhat compromised because they are not anonymous.

Among the more objective studies and atypical of this area of research, Norton and Hathaway (2008) asked learners to report on their experience as mentees after different kinds of learning activities. In the one-on-one context, mentors were perceived as a positive influence when they were knowledgeable about content and technology, adjusted their responses and activities to meet individual needs, were prompt in replying and responding to students, asked evocative questions, provided encouragement, compliments, and positive feedback, and maximized opportunities to relate with the mentee. (See also: Punyanunt-Carter & Wrench, 2008; Sweitzer, 2008; Waldeck, 2007)

Very few studies have focused on mentor perceptions. An exception is a study by Jones (2001) in which mentors of practicing teachers in both England and Germany were asked to give their perceptions of the mentoring process. There was strong agreement among the mentors from both countries that the role of the mentor included constructive and critical advising, honest support, and being a role model, although there was a clear recognition that there are serious limitations to being seen in that role. What is already interesting is the degree to which the mentor perceptions in this study and the mentee perceptions in Norton and

Hathaway's (2008) study are similar. The comparison of these two studies suggests that faculty members see mentoring more in terms of improving student work; students see it more in terms of personal encouragement. (See also Storrs, Putsche, & Taylor, 2008.)

No systematic research studies were found on the perceptions of those who have graduated and moved into their professional roles. One of the few accounts of mentoring from the perspective of several different stakeholders is given in the study by Sambrook, Stewart, and Roberts (2008). They provide a tripartite account of mentoring and being mentored in a doctoral program: one writer gives an account from the point of view of a supervisor, another as a doctoral student, and the third as a graduate who was advised and in turn became an advisor. Using an autoethnographic approach, they give a rich account of the nature of the relationships among the various parties and the part played in those relationships by the eminence of the mentor, locus of control, critique, and the development of independence as a scholar. This account is suggestive of but not specific about the factors that make for success in mentoring as seen by an alumnus/a.

The second line of research is that around mentoring doctoral dissertations in particular. Kearns, Gardiner, and Marshall (2008) developed the premise that three self-defeating behaviors make the writing of a dissertation a difficult and sometimes unsuccessful task: over-commitment, procrastination, and perfectionism. Their findings suggest that a coaching program addressing these behaviors can bring about significant changes, but mentors also need to be appropriately responsive for the coaching to work well; for example, having regular contact, giving timely feedback, and allowing open negotiation of responsibilities.

In a very large qualitative study of students in a counseling doctoral program, Protivnak and Foss (2009) identified among the qualities of positive mentoring: genuine caring, quality time with mentees, joint research projects, serving as role models, and offering holistic mentoring that takes both personal and professional lives into account. These and other similar studies (Barnett, 2008; Chan, 2008; Hall & Burns, 2009, Stephenson & Christensen, 2007) identify individual mentoring factors significant in mentoring students in online doctoral programs from the point of view of the various stakeholders.

The third line of research is relatively new but is likely to take on growing significance, and that is mentoring students in online programs. Several descriptive and theoretical pieces are available (e.g., Burgess, 2007; Norton & Hathaway, 2008; Leners, Wilson, & Sitzman, 2007) and make the argument that online mentoring can be at least as effective as face-to-face mentoring. A qualitative study (Williams, 2008) that compared face-to-face mentoring with online mentoring for undergraduate students revealed significant overlap of mentoring qualities identified by instructors and students: viz., (a) a student-centered orientation, (b) a humanistic learning orientation, (c) creating a context conducive to adult learning, (d) grounding learning objectives in an analysis of students' needs, and (e) facilitating the learning process. In addition, a uniquely online factor emerged that had not appeared in studies of face-to-face environments: maintaining a constant presence in the student's school life. This quality of constancy, the author notes, is "being reliable, loyal, and never too busy," and "being completely there and engaged in a constant way during each step and between them" (p. 204). The study suggests that the lack of face-to-face contact can be compensated for with regular use of telephone and email communications, shaped around the particular needs of the student at each stage of the study.

A fourth line of research addresses the relative importance of specific mentoring characteristics. For instance, Dua (2008) developed a Mentoring-Friendliness scale of 26 items

which she used to explore the mentoring climate of various departments with women students. The items in this case were drawn primarily from dissertation research conducted by Dickey in 1996 and therefore they are not so comprehensive nor so current as this present study. While the scale does include both academic and psychosocial attributes, it does not address issues related to the communication, competence, and challenge attributes as identified in the following conceptual framework.

CONCEPTUAL FRAMEWORK

As demonstrated in Figure 1, two broad domains of mentor behaviors and characteristics surfaced from the literature: academic and psychosocial. Several writers, calling on a history of writings on the topic, re-emphasized that for mentors, psychosocial attributes were equally as important to student development as the academic qualities that are usually associated with student learning (e.g., Mortenson, 2006; Anderson & Shore, 2008; Hu, Thomas, & Lance, 2008; Luna & Prieto, 2009; Johnson, 2008b; Sweitzer, 2008). In a review of research and developments in mentoring, Forehand (2008) notes from the earlier work of Johnson and Eby that virtues such as integrity, abilities including those in the cognitive, emotional, and relational domains, and competence in knowledge and skills were all important elements in a model of mentoring. Dua (2008), who also draws on earlier work, in this case that of Redmond, recalls the two parts of mentoring: the attitudes, knowledge, and behaviors of the profession to be transferred to the learner and the social and emotional interactions that make the transfer possible. Several writers, such as Sambrook, Stewart, and Roberts (2008), have been influenced by the differentiation made by Easterby-Smith, Thorpe, and Lowe (2002) who propose that the mentor's task is "to provide both technical and emotional support" (p. 14). Paglis, Green, and Bauer (2006) found in the organizational behavior literature, particularly in the work of Kram, the distinction between psychosocial and career functions of mentoring, where the former develops a student's competence, confidence, and effectiveness, and the latter, career development. Since their study was conducted within the "hard sciences", career development had largely to do with continuing research productivity beyond graduation. Within these two broad categories of professional or academic roles and what is often referred to as the psychosocial domain, several attributes emerge from the literature that explicate these two domains more fully, although in practice, academic and emotional or psychosocial support are interwoven (Mortenson, 2006).

Academic Domain

The academic domain encompasses technical and informational functions of the mentor that support mentee development of appropriate knowledge, skills, and attitudes. In the academic domain, four primary attributes were identified: competence, availability, induction, and challenge.

Competence

On the face of it, it would seem that mentors should be competent professionals. In fact, Anderson and Shore (2008) reiterate that being competent is "the major ethical principle" (p. 7) guiding the work of mentors. However, in the mentoring role, the specific nature of those competencies can be further clarified. Again drawing on Easterby-Smith, Thorpe, and Lowe (2002), technical expertise includes general knowledge in the field of research the student is pursuing, and a good working knowledge of research methods. Knowledge of institutional mores, specific program requirements, and how to navigate

the system to complete the program successfully are also mentoring requirements (Johnson, 2008b).   In addition, providing mentees access to resources, web sites, people, books, and organizations are important (Green & Hawley, 2009).

For mentors working in the online environment, expertise in web-based learning and the particular learning platform and software applications used in the institution are also important. Students viewed their mentoring as positive when mentors could answer relevant technology questions, or as Norton and Hathaway (2008) sum up their finding, when the mentor is well prepared to carry out the role of skilled online guide.

Availability

It would also seem to go without saying that mentors need to be available to their mentees (Easterby-Smith, Thorpe, & Lowe, 2002) but just how important that is and what this really means in the context of education has been demonstrated in several recent studies. In a study of personalized education, which closely parallels mentoring, Waldeck (2007) uses the term "immediacy" to describe teacher behaviors to include not only an instructor's presence in the classroom but also in professional and social situations outside the classroom. In a survey of undergraduate students, the most frequently identified characteristic of personalized education was the instructors' sharing their time outside of class for student needs. Instructor accessibility was defined for these students as having adequate office hours, being available to talk about personal issues, willingness to offer extra help outside of class time, taking time to advise, socializing, spending time in conversation about non-professional issues, and meeting in a variety of places, among other things.

Williams (2008) captures the notion of the accessibility of the mentor with the term "constancy." She found that, in the online environment, mentors and mentees agree that mentors need to be a constant presence in the student's life, using email, phone calls, and perhaps asynchronous online mentoring spaces to meet student needs through the various stages of the program. Norton and Hathaway (2008) also found that regardless of the particular online instructional approach, when the mentor is responsive to undergraduate learners, in this case students in a teacher preparation program, the students viewed their learning and the learning experience positively; when the mentor was not responsive, they viewed both the learning and the experience negatively. Immediacy, constancy, and responsiveness are the defining characteristics of availability for undergraduates.

Induction

The idea of inducting students into their respective professions lies at the heart of many definitions of mentoring. For example, Fletcher (2007) suggests that "[m]entoring enables transition" especially during the difficult times in the mentee's career (p. 78); Davis (2007) talks of the influence of mentoring "on the occupational trajectory and aspirations of an individual"; Anderson and Shore (2008) recapture the foundational work of Johnson and reiterate that one of the significant functions mentoring embraces is to enhance the protégé's professional and career development" (p. 30), further adding that even in the undergraduate setting a primary function of the mentor is to help mentees answer the fundamental vocational questions, Who and what will I be? Talley (2008) interprets the same idea for graduate students by stating simply that "[m]entoring is a method by which novice practitioners are taught to adapt and succeed in new

professional roles" (p. 331). In his literature review, Sweitzer (2008) reports that studies have shown effective mentoring can "enhance career outcomes, such as promotion, raises, and job satisfaction and offer psychosocial benefits that may include role-modeling, development of competencies, and work-role effectiveness" (p. 45).　Barnett (2008) adds nuance to this general idea of induction by introducing the affective along with the cognitive and behavioral learning associated with a profession; mentors need to model compassion, ethics, and well-functioning judgment and nurture these qualities in their mentees.　However, Paglis, Green and Bauer (2006) discovered that for students in physics, chemistry, and engineering, their initial commitment to the discipline was a more reliable predictor of their future involvement in research than the influence of mentors, which raises again the issue that each of the factors identified here require close examination and further research.

Induction of the mentee into new professional roles involves a number of specific moves on the part of the mentor, including introducing mentees to significant colleagues (Johnson, 2008b), that is: "connecting [them] with the right people through introductions and access to your networks" (White & Tryon, 2007, p. 1259); exposing them "to the greater academic and professional communities" (Burgess, 2007, p. 54); helping them to learn the skills of teaching at the university level (Suh, 2008); working with the mentee in the design, conduct, and reporting of research (Green & Hawley, 2009); and "writing letters of recommendation, . . . as well as modeling effective professional behavior and interpersonal skills," and working jointly on "writing grants and publishing" (Davis, 2007, p. 228).

In developing a Mentoring-Friendliness scale, Dua (2008) devotes at least eight items out of 26 to the notion of induction, including a faculty member's willingness to "provide information about educational programs," help students to "understand educational bureaucracy," "train students into the profession," "sponsor students," "socialize students into the institutional culture" and the "department culture," "inculcate professional values/ethics," and "engage in joint research/publications" (p. 311 [note #6]).　The mentor role is not to create clones of the mentor, but "to maximize their [mentees'] professional and personal potential" (Fletcher, 2007, p. 78) and nurture a growing sense of independence in the mentor-mentee relationship so that the mentee ultimately can exercise "personal and professional autonomy" (Anderson & Shore, 2008, p. 7).

In an important sense, the mentor is a gatekeeper to the profession by screening candidates for emotional, ethical, interpersonal, and academic fitness　Mentors have a responsibility of not permitting candidates with impairments in any of these areas to move into a profession that requires public trust (Johnson, 2008b).

Apart from the future-oriented induction that looks to the graduate's professional life, induction begins with the more immediate task of initiating the student into the program and department.　In other words, the first phase of induction that falls within the mentor's responsibilities is introducing the student to the mores and culture of the institution, as well as its specific processes and expectations (Strayhorn & Terrell 2007, Sambrook, Stewart, & Roberts, 2008).

Challenge

While the relationship between mentor and mentee is often described as friendly and collegial, the mentor must also challenge the mentee to continue to grow. Constructive criticism of the mentee's work is an important element of this challenge attribute. It is something that both the faculty member and the student may find difficult at times, (Sambrook, Stewart, & Roberts, 2008). Having to fail a student puts great strain on the mentor (Sharples & Kelly, 2007). In fact, balancing and integrating collegiality and advocacy with assessment and evaluation can make high demands on the mentor (Johnson, 2008b; Jones, 2001) but is essential if the candidate is to be screened for fitness for the profession and guided toward fulfilling his or her potential as a learner and a professional. On the positive side, Johnson (2008a) also notes that the dispositions that make good mentors--empathy and a helping orientation toward others--may enable early detection of flaws that can be addressed sooner rather than later in the student's program. While students may at first find extensive feedback on their work a little daunting and discouraging , if they rise to the challenge this affords them, they may come to agree with one student who reports that the experience pushed him to achieve at a level he could not have done alone (Caffery, 2007). The student adds, "They have encouraged me to question, demanded that I become adept at research, and continued to critique my writing. Through their commitment to me I am transforming into a scholar-practitioner" (Caffery, 2007, p. 384).

One of the primary tools for mentors to use to challenge their mentees academically and professionally is questioning. To be most effective, the question should be meaningful and usable and, in some cases, may open up the mentor's understandings as well as the student's. "[A]sking [emphasis in original] questions facilitates learning just as much, if not more, than providing answers" (Cordingly, 2006, p. 53). One mentee described his growth in these terms: My mentor "was more Socratic in his counsel. He would typically ask me, 'What is the question?' and consequently encourage me to follow a path to pursue the answers" (Federoff, 2008, p. 18).

Psychosocial Domain

The psychosocial domain includes the qualities and skills in building and sustaining interpersonal relationships, and the values, attitudes, and affects involved in mentoring. In the psychosocial domain, three attributes emerged: the faculty member's personal qualities, communication, and emotional support.

Personal Qualities.

Trust is one of the most frequently cited personal qualities that mentors should possess (e.g., Sambrook, Stewart & Roberts, 2008; Dua, 2008). Mentees are more likely to identify this in a mentoring relationship than mentors, possibly because of the generational differences between mentee and mentor (Smith, 2007). Trust is important because it permits both the mentor and mentee to "proceed to explore the possibilities for intellectual and personal development that their relationship offers without fear of exploitation or game playing" (Stephenson & Christensen, 2007, 71S). A non-confrontational style of communication and conflict resolution has been found to support the building of trust (Punyanunt-Carter & Wrench, 2008).

When trust is combined "with respect, openness, and a genuine and enduring interest in their shared interest in their area of exploration and development of the student's capacities" the mentor is less likely to risk "undoing the relationship and

unhinging its vital possibilities" (Stephenson & Christensen, 2007, 71S). Along with trust and friendliness, a good sense of humor and patience have been identified as important personal qualities of mentors (Ali, 2008). How these are demonstrated in an online environment will need to be examined.

Another important personal quality is the mentor's comfort with the mentee's growing independence. The personal transitions mentors make in the journey from being a doctoral student to becoming independent scholars in the process, and eventually to mentoring their own doctoral students is documented by Sambrook, Stewart, and Roberts (2008) who illustrate the kind of challenges that need to be navigated. The mentor needs to increasingly surrender control over the student's learning, and the student needs to assume increasing responsibility for that learning. Close personal connections with students can create a co-dependency that hinders rather than promotes the student's growth. Mentoring relationships "are ethical only when they exist to serve the protégé's needs, including the protégé's ultimate need for autonomy, and not to serve the mentor's needs" (Anderson & Shore, 2008, pp. 13, 15; See also, Schlosser & Foley, 2008).

Communication.

This attribute is closely tied to personal qualities since poor communication can result in distrust, confusion, and poor outcomes (Evans, 2007). When Waldeck (2007) set out to find the qualities of personalized education, the third most frequently cited quality was the instructor's competency in communication, and Punyanunt-Carter and Wrench (2008) found that the advisees' belief that they were being mentored was positively related to their "perceptions of their advisor's communication competence and perceived credibility" (p. 580). These researchers also found that aggressive and conflictual communication styles had some impact, although not large, on the mentor's credibility and effectiveness (Punyanunt-Carter & Wrench, 2008).

Active listening on the part of both mentor and mentee is an important aspect of communication in this mentoring context (Johnson, 2008b). Cordingly (2006) identifies several mentor behaviors generally associated with effective dialogue: "valuing silence," "listening to what has actually been said," "using affirming body-language" which may require some translation for the online context, and "using some of the same words [as the mentee] to value and reframe, develop, analyze or check meaning" (pp. 50-57).

Evans (2007) reiterates what Singleton and Litton had earlier outlined as the four essential characteristics of good communication in the mentoring context: stay involved in the conversation even if it becomes uncomfortable; speak the truth; permit the discomfort to promote personal growth; and disagree respectfully. In sum, Evans, based on Singleton and Litton, reminds us that these kinds of communications are "courageous conversations" (p. 389). This outline for mentors suggests a much more collegial conversation than one would find in some other dialogic educational situations.

Over time, the relationship and communication between a mentor and mentee take on a more mutual and collegial quality (Talley, 2008; Johnson, 2008b; Waldeck, 2007), a quality that may be even more important for women and students of color (Johnson, 2008b; Luna & Prieto, 2009). The relationship may become more symbiotic (Stephenson & Christensen, 2009), and come to have an increasing impact on both the mentor and mentee (Anderson & Shore, 2008; Johnson, 2008b, Stephenson &

Christensen, 2009). It may also involve more self-disclosure on the part of the mentor as the relationship develops (Johnson, 2008b). The mentor-mentee relationship that grows in collegiality and mutuality is dependent on communications that are trusted and open, where disagreements are not seen as permanent obstacles, and the purpose of the interactions is focused on intellectual and professional growth (Stephenson & Christensen, 2009).

Emotional Support

While academic support can result in greater productivity (publications and presentations, for instance), psychosocial support can result in greater satisfaction with the mentor and the program, as well as self-sufficiency as a researcher (Forehand, 2008). A primary quality in the psychosocial domain is emotional support. This goes beyond the academic knowledge that a mentor might share and the guidance he or she might give in how to conduct research and write a dissertation to include the emotional welfare of the student. Students' self-esteem, confidence in their abilities, self-image, and trust in their professional competence are all within the scope of the mentor's support (Mortenson, 2006). This becomes particularly critical when the student faces failure and is dealing with shame and a lack of confidence. When mentors bring to this situation both emotional support and academic guidance, students are more realistically able to reappraise their situation and make decisions about next steps, a finding that holds true transculturally. Overall, as Sambrook, Stewart, and Roberts (2008) observe, mentors must be "emotionally intelligent . . . and self-confident in this particular role" (p. 81).

Johnson (2008b) recaptures some of the themes common in the research literature: emotional support can develop the confidence to take necessary risks; the greater the amount of perceived emotional support, the higher the student's self-esteem, satisfaction, happiness and loyalty as an alumnus/a, and the lower the student's sense of loneliness; emotional and social support can reduce the stress experienced during the early stages of a doctoral program.

Encouragement--accentuating the mentee's promise and talent--and affirmation--identifying and confirming a mentee's potential--are singled out for particular mention as powerful elements in giving emotional support (Johnson, 2008b). Forehand (2008) adds the notions of respect and promoting a student's academic interests. In the analysis conducted by Protivnak and Foss (2009) of themes that emerge in doctoral student experience, in this case in the field of counselor education, mentoring was one of the important indicators of success, and on closer examination it seems mentoring is largely described as emotional support. Students spoke of encouragement and genuine caring as significant factors in their mentoring experience. Hu, Thomas, and Lance (2008) found that friendship, along with acceptance, caring, and encouragement, for international students minimized the particular stress those students might be under as they study abroad. Another element of emotional support that has been identified is the modeling and promotion of self-care during the study program (Green & Hawley, 2009; Suh, 2008). A critical duty that falls to the mentor is to "shield protégés and intervene in the face of overt hostility, non-constructive criticism, or even direct and unfair threats to a student's program status" (Johnson, 2008b, p. 36). Incidentally, Heinrich (1999) found a disturbing pattern in the mentoring of women doctoral students to be "the phenomenon of silent betrayal," (p. 460) that is, women advisors not defending a woman student,

possibly because of a history of subtly enforced non-confrontation in the development of their own careers.

One of the significant findings in Waldeck's (2007) study of students' perceptions of personalized education is the willingness of the mentor to counsel students, including counseling about personal problems the student might be experiencing. Waldeck comments that a surprising element of the study was the amount of time faculty members spent with their students and the depth of the counseling they offered. However, there are dangers here, and, as one of Crutcher's (2007) subjects observes: "[I]t is difficult to maintain mentor authority if one becomes over-friendly with mentees" (p. 24). There is obviously a balance required in this regard; mentoring can suffer if one is too distant or if one is too friendly (Sambrook, Stewart & Roberts, 2008).

In mentoring, a greater degree of boundary crossing, that is, cross-sharing elements of one's personal life, opinions, and activities between mentees and mentors, is not only condoned but encouraged than one would find in other kinds of professional relationships, such as between a counselor and client (Barnett, 2008; Johnson, 2008b). As well, Johnson speaks also of the kind of boundary-crossing where the mentor offers personal advice to the mentee so that "the mentor may begin to subtly assume the role of professional counselor" (p. 35), exercising this role with great care. Such boundary crossings as these are permissible when the intent clearly matches the agreed roles and goals of the relationship, the mentee perceives it as positive and not harmful or exploitative, and it is for the purpose of serving the student's needs and not those of the mentor (Barnett, 2008). Serving as a student's counselor and mutual confidante, though, should not replace serving as the student's instructor, research supervisor, or assessor (Johnson, 2008b; Schlosser & Foley, 2008).

IMPLICATIONS FOR FUTURE RESEARCH

Future research needs to confirm, disconfirm, extend, or contrast the two domains and seven attributes that form the conceptual framework for mentoring based on the literature review. The authors of this article are conducting such research through the development of a mentoring scale that can test the theoretical foundations of the conceptual framework. If that research confirms the conceptual model in general, further research might investigate its relevance across gender, cultural, and ethnic groups as well as across various disciplines.

There is also continuing need to investigate whether faculty members, students, and alumni/ae agree on what qualities make for effective mentoring. Prior studies of doctoral mentoring have queried faculty and students, but only individual and anecdotal reports have reflected the views of alumni/ae. Consequently, there are few if any studies that systematically compare student, alumni, and faculty member perceptions of mentoring.

Another area of inquiry that this model opens up is to discover whether the same qualities of effective mentoring in the face-to-face situation apply in the online environment, to what extent they might apply, and whether or not there are other significant qualities that might emerge for mentoring doctoring students online. This area of inquiry is becoming increasingly significant as more online universities enter the arena of graduate education and as more "bricks-and-mortar" universities add online programs to their regular calendar of offerings.

Current literature indicates that mentoring approaches need to be adjusted to take into account the gender and cultural or ethnic backgrounds of both mentees and mentors in higher education today. While the researchers considered the literature on diversity in mentoring

approaches in developing the framework in this study, future studies may investigate further the salience of the framework against theories and research around mentoring different gender and ethnic groups.

SUMMARY

The literature review reveals four major lines of research in regard to doctoral mentoring: perceptions of successful mentoring in general, mentoring of doctoral dissertations in particular, mentoring specific to the online environment, and relative importance of mentoring behaviors. Themes in the research and professional literature yield specific mentoring characteristics and behaviors from which we have developed a conceptual framework for mentoring doctoral students with two major domains, academic and psychosocial. Each of these two domains incorporates a constellation of traditional mentor behaviors and characteristics that were summarized as mentoring attributes, four of which (competence, availability, induction, and challenge) are associated with the academic domain and three of which (personal qualities, communication, and emotional support) are associated with the psychosocial domain, forming a conceptual framework for mentoring. Further studies, some of which are currently being pursued by the authors, are needed to validate the conceptual framework developed through this literature review, particularly in different contexts and with participants from diverse backgrounds.

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