E-mentoring in an Online Course: Benefits and Challenges to E-mentors

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Abstract

This article describes the outcomes of an e-mentoring scheme used as a functional component within an online graduate course in human resource development. During the online course, individual students engaged in independent field projects, drawing upon advice and guidance from distanced practitioners who served as e-mentors. E-mentors were paired with students to guide the success of the individual field projects. As part of the design of the online course, an evaluation was carried out to assess the experience of the e-mentors, with a focus on perceived benefits and challenges of the e-mentors. Presented is a brief overview of the e-mentoring scheme, the e-mentoring assessment methodology, and the reported outcomes of the e-mentoring experience by the e-mentors.

Key Words: E-mentoring, E-mentoring outcomes, E-mentoring design, E-mentoring evaluation, Capstone experience

Introduction

In 2009, a new course design was initiated to culminate student learning in a two year online Master's degree program of study. The course consisted of independent field projects located in host organizations where previously learned skills and knowledge might be applied. The distanced students both sourced the host organization and undertook the applied field projects. The course design included an e-mentoring component to provide guidance and assistance to the student in field project planning and execution. An evaluation study was simultaneously undertaken by third party researchers to provide an assessment of key course components, particularly the e-mentoring outcomes.

This paper reports on the outcomes of the e-mentoring experience, specifically e-mentor benefits and e-mentor challenges, as described by the e-mentors. Also described in this paper is the course design and its e-mentoring component, followed by descriptions of the evaluation methodology used to surface e-mentor outcomes, and ending with a discussion of the principal findings of the e-mentoring experiences as benefits and challenges to the e-mentors.

Literature

The concept of mentoring dates back to Greek mythology when Odysseus leaves his son, Telemachus, in the care of Mentor for guidance and teaching (Homer, trans. 1961). Mentors have been thought of as wise counselors and guides ever since. The term '*mentor*' has been described as

synonymous with trusted adviser, teacher, and wise counselor (Gentry, Weber & Sadri, 2008; Guest, 2000). Conceptually, mentoring refers to a relationship where one individual receives advice, coaching and guidance from another individual (Hamilton, 1993). Guest (2000) argued that mentoring involves sharing experiences, offering encouragement, developing insight, and experiencing growth through a two-way relationship.

Early theorists described the different functions and behaviors of mentoring to aid in the growth and development of others (Eby, 1997; Kram, 1985). Researchers have studied mentoring across a variety of contexts and disciplines, including youth mentoring in transitional contexts (Mueller, 2004), faculty-student and faculty-faculty mentoring in educational contexts (Akin and Hilbun, 2007; Ehrich, Hansford & Tennent, 2004; Lee, 2009), and career development related mentoring in the workplace (Gentry, Weber & Sadri, 2008; Homitz & Berge, 2008; Wong & Premkumar, 2007).

Within the workplace, mentoring has been referred to as a means to facilitate transitional adjustment and professional development (Risquez, 2008). Mentoring has been used to sustain training efforts (Homitz & Berge, 2008), to enable individuals to adjust to the workplace more readily (Jossi, 1997), to increase the pace of organizational change (Ragins & Cotton, 1993), and to assist career development within an organization (Kram, 1985). In such cases, organizational improvement (Homitz & Berge, 2008) or enacting organizational strategy (Shrestha, May, Edirisingha, Burke & Linsey, 2009) has been the primary purpose of the mentoring scheme.

At the individual level, mentoring has been described as a developmental model for professional advancement (Megginson, Clutterbuck, Garvey, Stokes, & Garrett-Harris, 2006), and has become a common feature in training and career development (Homitz & Berge, 2008). This concept appears to be appropriate to mentoring schemes within the workplace, where a more experienced professional guides and stimulates the development of a junior practitioner (Guest, 2000). The focus of this concept of mentoring is not upon the relationship between the parties, nor upon the benefit to the organization. Rather, the focus is on the professional growth and development of the junior party (Clutterbuck, 2001; Hamilton, 1993; Hay, 1995). Mentoring is becoming increasingly important in career development in the workplace as organizations become more complex and dependent upon individual skills and the application of training in distanced locations (Homitz & Berge, 2008; Wong & Prekumar, 2007).

Constructs of mentoring.
Perren (2003) identified several constructs within the concept of mentoring applicable to both education and training. These constructs included: a one-to-one relationship with the mentor being more experienced; an extended relationship; confidentiality; and, focused upon individual growth and development. The one-to-one relationship construct has been described by Shrestha et al. (2009) as an arrangement where one individual receives advice, coaching and/or counseling from a second, usually senior, individual. The one-on-one aspect of this depiction has also been described as the face-to-face concept of mentoring (Hamilton & Scandura, 2003).

The construct of experience within the mentoring arrangement refers to the participants' relative establishment within a profession or field (Akin & Hilbun, 2007). The more experienced person takes on the role of mentor, while the junior or less experienced person assumes the role of protégé or beginning professional (Yaw, 2007).

Extended relationship refers to the mentoring process occurring over a period of time (Bierema & Merriam, 2002; Guest, 2000), and of a duration that meets development needs (Murray, 2001). In traditional mentoring settings, the mentoring relationship initiates and is nurtured by frequent face-to-face contact between the two parties over a period of time (Hamilton & Scandura, 2003).

Confidentiality refers to non-disclosure of exchanged information to those outside of the mentoring relationship. Literature suggests that effective mentoring relationships are trust based (Eby, 1997; Risquez, 2008) and power free (Single & Single, 2005). It is considered useful for the mentor to be impartial with regard to protégé performance and for the protégé to be unexposed to the mentor's contexts, such that exchanges can occur in confidence (Risquez, 2008).

Individual growth and development involves skill and expertise enhancement of the protégé as a focus of the mentoring activities (Murray, 2001). Mentoring has been found to be valuable to the individual development of protégés within a variety of different situations, such as newly-employed professional women (Headlam-Wells, 2004), interns (Lee, 2009), workplace managers (Gentry, Weber & Sadri, 2008), and trainees (Homitz & Berge, 2008). Among professions, mentoring has been used as a developmental model in library sciences (Lee, 2009), corporate business (Homitz & Berge, 2008; Rothman, 2007), entrepreneurism (Perren, 2003), public health (Mahayonsnand, 2000), and education (Ehrich, Hansford & Tennent, 2004; Forsbach-Rothman, 2007).

Concept of e-mentoring.

E-mentoring, conceptually, is considered the linking of a senior, more experienced person with a lesser skilled individual, independent of geography (Mihram, 2004). The primary form of communication between the parties is electronic (Hamilton & Scandura, 2003). E-mentoring is considered similar to traditional mentoring, although there is limited research directly comparing the two concepts (Knouse, 2001; Risquez, 2008). Thus, while e-mentoring is growing in use (Yaw, 2007), a fully developed concept of e-mentoring, complete with parameters, contexts and outcomes has not been fully explored (Headlam-Wells, Gosland & Craig, 2005). O'Neil and Harris (2005) noted that although e-mentoring schemes draw inspiration from traditional mentoring schemes, they develop differently and serve different needs.

Outcomes of e-mentoring.

Research on e-mentoring has predominantly focused on the outcomes of e-mentoring to the organization or to the protégé, with fewer studies examining the outcomes of e-mentoring for the e-mentor (Perren, 2003; Risquez, 2008).

For organizations, e-mentoring has been found to be an efficient method to enforce distance training and education (Homitz & Berge, 2008). It also presents lower cost and increased flexibility (Shrestha et al., 2009), as the medium is free from time and place constraints (Akin & Hilbun, 2007). Thus, e-mentoring can suit busy time schedules and accommodate distanced locations (Knouse, 2001; Wong & Prekumar, 2007; Homitz & Berge, 2008). E-mentoring within organizations provides options to overcoming barriers that may be organizationally driven such as flattened organization structures and the changing nature of work (Hamilton & Scandura, 2003). Organizations have utilized e-mentoring to facilitate expatriate employee adjustments (Gentry, Weber & Sadri, 2008), to support non-linear career paths (Hamilton & Scandura, 2003), and to support entrepreneurism (Perren, 2003).

For the protégé, documented outcomes of e-mentoring have included informational, psychosocial, and instrumental benefits to the junior party (Single, 2004). Informational benefits refer to obtaining knowledge and access to information deemed advantageous to the protégé (Single & Single, 2005). The information represents subject matter transfer (Single & Single, 2005) and is deemed useful for real world application (Yaw, 2007). Protégés can initiate contact, take responsibility for the communication and activate discussion to obtain information (Yaw, 2007). Psychosocial benefits refer to self-esteem and confidence building in the protégé (Single & Single, 2005), and improvement in the professional identity of the protégé (Barton, 2001). Instrumental benefits refer to the evolution of the relationship into a sponsorship which promotes protégés and provides protégés with opportunities for increased visibility and advancement (Single & Single, 2005). The protégé is believed to experience greater career success because of the sponsorship of the e-mentor (Barton, 2001).

E-mentor outcomes - benefits and challenges

Outcomes to the e-mentor have been reported as a secondary effect of e-mentoring (Akin & Hilbun, 2007; Lee, 2009) with regard to both benefits and challenges. The literature has cited e-mentor benefits in technological skills, professional assessment, social benefits, and psychological benefits (Burke & Cooper, 2007; Eby & Lockwood, 2005; Homitz & Berge, 2008; Shrestha et al., 2009). Technological skills refer to electronic communication skills learned as ideas, practices and techniques are shared via an electronic medium (Clutterbuck & Cox, 2005; Homitz & Berge, 2008). The e-mentor has been found to gain technological skills from technological support personnel and sometimes from the protégés (Homitz & Berge, 2008).

An e-mentor benefit of professional assessment refers to the viewpoint which bosses have upon the e-mentor, as mentors have historically been existing employees within an institution or organization (Kram, 1985). Recent studies have indicated that e-mentors benefit by being viewed more favorably by bosses (Lee, 2009) and are rated more highly by bosses (Gentry, Weber, Sadri, 2008). Social e-mentor benefits refer to the opportunity to network (Shrestha et al., 2009), including a greater sense of teamwork and collegiality for the e-mentor (Single & Muller, 2005; Yaw, 2007). Psychological e-mentor benefits refer to several aspects of personal satisfaction. E-mentors have been found to gain personal satisfaction from offering support and advice to others (Shrestha et al., 2009; Yaw, 2007), from influencing the future of a field or profession (Lee, 2009; Yaw, 2007), or from knowing that knowledge and expertise are valued (Eby & Lockwood, 2005).

Challenges to e-mentors have been identified in communication, technology use, and determining the mentor role. Communication challenges refer to the unique characteristic of electronic media as the central communication vehicle between e-mentor-protégé pairs (Wong & Premkumar, 2007). Electronic medium communiqués have been found to be unclear or not conducive to thoughtful transfers (Shrestha et al., 2009) and open to mis-interpretation (Hamilton & Scandura, 2003). E-mentors can also have difficulty manipulating or operating the electronic technology in which e-mentoring takes place due to individual factors (age, gender, ethnicity) or situational factors (perceived ease of use and perceived usefulness) (Hamilton & Scandura, 2003). Determining the mentor role as a challenge to e-mentors refers to distinguishing between the teacher/tutor role and the guide/coach role in the e-mentoring relationship (Forsbach-Rothman, 2007; Homitz & Berge, 2008). E-mentors function more like wise counselors rather than trainers or educators, yet this electronic counselor role has not been completely prescribed.

Within a portion of the published literature, it is suggested that e-mentors experience similar benefits and challenges in e-mentoring experiences as in face-to face mentoring (Shrestha et al., 2009; Single & Single, 2005), with a few advantages and disadvantages inherent in the medium (Wong and Premkumar, 2007). However, documented evidence of the benefits of e-mentoring to e-mentors has often been secondary to protégé results in the research on e-mentoring outcomes (Huling & Resta, 2001; Shrestha et al., 2009). In general, the literature on e-mentoring indicates only exploratory academic undertakings (Risquez, 2008; Yaw, 2007), and suggests continued research to fully understand the full outcomes of e-mentoring (Yaw, 2007). This study attempts to address this research gap by offering evidence of the e-mentoring benefits and challenges to e-mentors, as reported by practicing e-mentors.

Definition of e-mentoring.

To encapsulate this concept, e-mentoring has been defined as "a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring." (Bierema & Merriam, 2002, p. 214). This definition was adopted in the subject study as it captures the benefits to both parties, the electronic nature of the communication, and the temporal and physical differentiating characteristic of e-mentoring.

Description of the e-mentoring context.

The subject e-mentoring design was a component of a structured course in which external professionals served as practicing e-mentors. The course was designed as a capstone experience in which adult students applied subject matter material gained in prior course study to real-world settings by conducting independent field projects. The field projects took place within host organizations identified by the adult students, with the host organization generally represented by the student's employer. The student was located on-site at the field project locations. The e-mentor was intended to act as a guide for the student in planning, executing and analyzing the field project, and in reporting results. The specific e-mentoring objective was to assist in student learning by advising on the field project.

The structure of the subject e-mentoring scheme has been described in detail in Williams & Kim (2011). The structure included a defined time frame, formal pairing of protégés and e-mentors, a defined time period, clear learning objectives, and a planned assessment.

53 students and 18 mentors participated in the capstone experience course such that e-mentors were paired with students in a 1:3 ratios (there was one instance of a 1:2 ratio). The students and the e-mentors were both temporally and geographically distanced with students located in the United States and 7 international countries, and e-mentors located primarily in the United States and Canada. Thus, the use of electronic media was the primary method of communication, thereby creating an e-mentoring context.

Mentors were recruited by the course instructor based upon historical professional experience, subject matter expertise, affiliation with the sponsoring university (i.e. alumni), or familiarity with the existing online program. An extensive training session was conducted for the e-mentors which included learning objectives, course content, technology training, and specifically the role of the e-mentor and expectations of the e-mentoring relationship (Mentor Packet, 2009,

Department of Human Resource Education, College of Education, University of Illinois at Urbana-Champaign). E-mentors and students were formally paired based upon the nature of the protégé-selected work project, and the e-mentor's respective profession or subject matter expertise. The course was conducted over a six month time period, which also constituted the initial duration of the e-mentoring relationship.

Course requirements were for students to independently execute a comprehensive project within an applied organizational setting, and reflect upon the applied experience when completed. Students were to execute planned phases of: project idea generation; project proposal; project plan; project implementation; project report; and, personal reflection. Course assignments mirrored the progressive phases of the course design with assignments generally due at the completion of each phase. Faculty instruction involved monthly synchronous sessions which mirrored the phases of assigned project management work. Students were required to attend monthly synchronous instructional sessions, while e-mentors attendance at instructional sessions was optional.

The synchronous sessions were held on Elluminate[TM]. This virtual classroom simulates the characteristics of a physical classroom with supported features such as simultaneous speakers (up to 6 individuals), hand-raising, display of slides, simultaneous video transmission (up to 6 individuals), instant public and private text chat, and breakout rooms for smaller group meetings. During the synchronous sessions, students not only listened to and participated in the lecture and discussion, but also conversed amongst themselves (via instant chat messages in the virtual classroom), sharing their experiences, advice, and resources. Also, the students could request a private breakout room if they wished to speak to their e-Mentors about their projects outside the normal class time.

While Ellumiante[TM] was used for synchronous class meetings, asynchronous course delivery was achieved via Moodle. This open-source learning management system served as the course website where critical information such as master schedule, course syllabus, assignment instructions, and important announcements were posted. Moodle also had assignment drop boxes where students uploaded their assignments for their e-Mentors to review and provide feedback.

An extensive amount of training on using Elluminate[TM] and Moodle was provided to the e-Mentors prior to the beginning of the course, and on an on-going basis. The e-Mentors received training on utilizing essential features on these two course delivery tools so that they could participate in the e-Mentoring with sufficient level of technological autonomy. E-mentors were not restricted to any one form of communication with their protégés, and were encouraged to use the communication tool most comfortable to the pair. On-going technical support was also made available to the e-mentors via dedicated tech-support personnel, who took the responsibility of trouble-shooting any technology-related problems that e-Mentors were experiencing. Williams and Kim (2011) points out that these types of training and ongoing support tactics are critical for e-Mentors to carry out their advising duties successfully, smoothly, and comfortably.

While the official, recordable communications occurred on Elluminate[TM] and Moodle, e-Mentor-student conversation also occurred one-to-one via phone conversations and e-mail exchanges. E-mentors provided individual support to students in the execution of each planned project phase and guidance in the completion of required course assignments. Within the pairings, e-mentors offered students individualized strategies for project design, implementation and results reporting. Williams and Kim (2011) discuss the communication tools used for this e-Mentoring context in full detail.

Evaluation

Simultaneous with course design and the establishment of an e-mentoring scheme was the commissioning of a formal evaluation conducted by three individual researchers who were external to the online course or its execution (Sunderman, Son, & Greene, 2009). The evaluation consisted of a mixed method assessment of the course experience from various user perspectives. It included an examination of the e-mentoring scheme from the e-mentors' perspective as a structural component to the course design.

Methodology

A mixed method research design was utilized to gather e-mentor data in both qualitative and quantitative forms from the participating e-mentors. Commonly accepted professional and ethical standards were followed throughout including approval from the campus Institutional Review Board.

Qualitative methods included telephone interviews of individual e-mentors (38%; n=7) conducted during the last 6 weeks of the 6-month long course. An invitation to participate along with a description of the evaluation project was sent to all 18 e-mentors one month prior to scheduling the interviews. Interview protocols relied on open-ended questions and neutral probes designed to elicit detailed responses of the e-mentor's opinions and experiences, including both benefits and challenges to the experience. Interviews averaging 60 minutes in length were audio recorded, transcribed, and coded for themes.

Analysis of the coded data from the interviews informed the development of a quantitative questionnaire available to all e-mentors at the end of the course. An invitation to participate along with a link to the online survey tool was sent to e-mentors electronically. E-mentors willing to participate clicked on the link and entered an online survey tool designed to collect data confidentially. The questionnaire included 12 items that probed e-mentor perceptions and experiences using multiple formats including: yes/no, 10-point rating scales, and Likert-style agree-disagree scales. Fifteen e-mentors responded (79% response rate) to the quantitative questionnaire. Descriptive statistics were calculated for all items which were assessed for relative importance.

Offered herein are the findings of the e-mentor assessment as reported in the evaluation report (Sunderman, Son & Greene, 2009), as well as descriptive statistics and direct e-mentor quotes from interview data.

The E-Mentor Experience

Benefits to the e-mentors.
The subject e-mentor scheme revealed similar individual benefits to the e-mentors. Key benefits to the subject e-mentors included the ability to share knowledge and experience with someone who could benefit directly from e-mentor expertise, working with students per se, and making a connection to the host university (Sunderman et al., 2009).

For the e-mentors in the subject study, utilizing expertise for advisory purposes to share knowledge and expertise was satisfying and fruitful. One mentor commented:

When the students started, the projects were just so big they weren't going to get done. It has been really fascinating to participate in their work and give them guidance.
(Sunderman et al., 2009)

As this excerpt indicates, the opportunity to provide guidance and share knowledge with student protégés was valued by the e-mentors. A high value on sharing expertise was cited in both interview and survey data within the evaluation (Sunderman et al., 2009). This finding supports the psychological benefit outcome of e-mentor personal satisfaction in prior e-mentor research studies (Shrestha et al., 2009; Lee 2009; Yaw, 2007).

Working with students per se was also found to be a major benefit for the subject e-mentors. According to the evaluation study, some e-mentors were initially feeling insecure about their abilities as e-mentors, especially when they did not have extensive project management experience. However, "once mentors had some experience working with students, and were assured that they had something to offer, the pleasure in making the connection with students clearly surfaced" (Sunderman, et al., 2009, p. 38). E-mentor comments that support this finding include:

This is a new approach for the students as well as for the mentors. Some of the students are more agreeable to the process and other students are working more independently. It depends on the student and on the intensity of their project. I would say that I could spend 10-15% of my time each month [with students]. I try to make myself available as often as they need.

When the students are ready to work, they want an instant reply.

Making a connection to the host university was another highly rated benefit for the e-mentors. Making a connection to the university surfaced in comments related to mentor support and training, as indicated in the following comments:

A formalized gathering was supportive of the mentoring experience. I thought it was good to have mentor training. I appreciated the educational session that would allow me to understand the course expectations. I want to know what the other mentors are doing. I think we could mentor each other.

I really appreciated the opportunity to participate in this course. I like the idea of continuing my relationship with the University [sic]. (Sunderman et al., 2009, p. 29)

The connection to the host university finding may be similar to the collegiality benefit noted for e-mentors by Shrestha et al. (2009), Single & Muller (2005) and Yaw (2007), as it relates to the social benefit of networking or an affiliation with a group. However, connecting to a specific host organization did not surface as a finding as it had in prior research (Gentry, Weber & Sadri, 2008; Risquez, 2008; Shrestha et al., 2009).

The quantitative survey of the e-mentors resulted in the data regarding benefits to the e-mentoring experience, as listed in table 1.

Question 9: Please rate the mentoring experience in this course according to what you feel is most rewarding or fulfilling*						
	Not at all Meaningful Value of Response = 1	Marginally Meaningful Value of Response = 2	Somewhat Meaningful Value of Response = 3	Extremely Meaningful Value of Response = 4	Total Responses	Mean Value of Responses	Rank Most Fulfilling to Least Fulfilling
Working with students.	0	0	5	10	15	3.5	2
Being able to share my knowledge, experience, and expertise.	0	1	4	10	15	3.6	1
Making a connection to the University of Illinois	0	2	7	6	15	3.3	3
Adding something to my resume.	4	4	3	4	15	2.5	5
Getting some experience teaching.	2	5	4	4	15	2.7	4
Receiving remuneration for my time.	5	8	0	2	15	1.9	6

*These questions relate to intrinsic and extrinsic rewards for mentors. Rating scale was from 1 (low) to 4 (high)

Table 1: Results of the end-of-experience survey of the e-mentors

As shown above, responding e-mentors rated sharing knowledge and expertise as the highest e-mentor benefit (3.6/4.0 scale) followed closely by working with students per se (3.5/4.0 scale). Making a connection to the university was not quite as highly rated (3.3/4.0 scale).

A further benefit that the e-mentors reported was gaining teaching experience. However this benefit was rated lower by the e-mentors than other benefits discussed above (2.7/4.0 scale). The evaluators concluded that e-mentors placed a higher value on being helpful to their protégés (e.g. sharing their knowledge and expertise, or working with students per se), rather than on the benefits inuring to the e-mentor personally (Sunderman et al., 2009).

Overall, the evaluation reported that subject e-mentors enjoyed their role and responded to the intrinsic rewards of the experience.

I have had this wonderful sense of satisfaction because they [the students] seem really interested in doing a good, usable project… some good work came out of it [the e-mentoring process]. It puts a smile on my face just to think about it. (Sunderman et al., 2009, p.38)

Thus e-mentors in the subject study reported personal satisfaction benefits similar to reported benefits in studies which were not formally evaluated (Akin & Hilbun, 2007; Eby & Lockwood, 2005; Lee, 2009)

Challenges to the e-mentors.

The evaluation study conducted (Sunderman et al., 2009) also presented evidence of practical challenges experienced by e-mentors. The challenges experienced by the practicing e-mentors differed somewhat from the challenges reported in prior studies. Areas where practicing e-mentors reported challenges were technology, grading, and the self-perception of personal mentoring abilities.

Technology posed a degree of challenge to some e-mentors. The online course design and the e-mentoring scheme required the use of two major communication and delivery tools used as courseware, both of which were electronic in nature. Additionally, e-mentors relied on e-mail exchanges and phone calls for communication with their respective protégés. One e-mentor summarized the discomfort as follows:

> *I am hesitant about the technology. I did not participate regularly in the synchronous sessions. Now, I think I probably would have been a better mentor had I done more of that. I would recommend participating in the synchronous sessions for future mentors. This is an online course so I think as mentors we should be willing to get online.*

Both of the two courseware tools (Moodle and Elluminate^{TM}) were new to the e-mentors and technologically unfamiliar. It may be that technological unfamiliarity, despite the initial training and on-going technical support provided, caused hesitancy in courseware use by e-mentors. Use of technology and e-mentor comfort with technology in computer mediated communication has surfaced as a consistent challenge to e-mentors in prior studies (Bierema & Merriam, 2002; Headlam-Wells , Gosland & Craig, 2006; Risquez, 2008; Shrestha et al., 2009).

Grading posed a challenge and the responsibility for grading was initially uncomfortable for the e-mentors. This might have been due to the fact that participating e-mentors had not previously experienced grading as an activity. Also e–mentor grading was a new dimension to the online courses offered by the sponsoring university. E-mentor discomfort with grading surfaced as follows:

> *I am comfortable with the assessment part of this now. At first, I think we were all challenged with the first assignment or two. The grading part has been the biggest challenge because this was the first time through for all of us.*

> *Initially, I didn't know what was considered a good assignment. I didn't have a reference point. I thought my students' assignments were done well, but I didn't know what a real instructor might think. Grading is difficult when I have a universe of three [protégés].*

Self perception of e-mentoring abilities surfaced as an initial challenge when e-mentors disclosed self-reflection on their e-mentoring experience. E-mentors indicated perceptions of self-improvement possibilities, not perceptions of inadequacy. E-mentors felt they had done an adequate job of e-mentoring their protégés, but also believed they could do even better in a subsequent effort. One e-mentor summed that self-perception as:

I am quite used to the environment I work in. Getting outside of that environment has helped me learn a little bit about myself. I realized that I might not be able to have the same expectation with people I don't really know, that don't work for me. Also, when you are doing all this virtually, there can be some difficult parts. This class was just handled so well [by the sponsoring department]. [The instructor] did such a fantastic job. Everybody has been very helpful. (Sunderman et al., 2009, p.32)

E-mentors seemed to consider, in detail, what they could do to perform better as an e-mentor and this was summarized as a challenge in the evaluation report (Sunderman et al., 2009). This finding supports results in previous studies where e-mentor reflections indicated an interest in personal skill improvement from the mentoring experience itself (Ehrich et al., 2004; Shrestha et al., 2009)

Overall e-mentor experience.
Despite the challenges discovered, evaluation findings reported a positive overall experience by the e-mentors.

Personally, this mentoring experience has helped me learn a little bit about myself and, hopefully, I would be a better mentor next time.

Of interest is the personal benefit reported by e-mentors from learning about themselves and learning to be better mentors in the future. This e-mentor finding is similar to the professional and personal mentor benefit found in the Ehrich et al. (2004) meta-analysis of mentoring programs, and in the mentor improvement in own mentoring skills reported by Allen, Poteet & Burroughs (1997).

A summary finding, as reported by Sunderman et al. (2009), was "Mentors saw their role as central to the [field project] experience for students. They enjoyed the experience and felt rewarded by it" (p. 33).

Conclusion

…E-mentoring is not necessarily based on a wise elder dispensing advice and instruction to a protégé. Rather it is a mutually beneficial relationship that is highly versatile and can be adapted to work in a variety of settings - (Biereman & Merriam, 2002, p.219)

The function of a mentor, or e-mentor, is not to tell the protégé what to do, nor is it to give orders or directives. The function of the mentor is to present possibilities to the protégé and to advise on possible outcomes.   Similarly, the protégé reacts and questions the outcome possibilities specific to his/her new experience. Much has been investigated regarding the benefits to the protégé in this look toward outcomes. The focus of prior research has been on the career development and networking skills inuring to the protégé. Yet, the e-mentor also experiences outcomes from the e-mentoring experience. As outlined herein, the e-mentor personally grows and changes simply because of the experience of sharing with others, and in so doing develops a new viewpoint on self and self skills. Thus, the e-mentoring experience brings about individual change in the e-mentor.

We have offered evidence of e-mentor benefits and challenges that broadly supports the literature on e-mentoring outcomes. E-mentors reported both social and psychological positive outcomes. Personal satisfaction from sharing knowledge and experience, and working with student protégés on field projects was highly valued. E-mentors also valued opportunities to network, socialize and to self-reflect, which in turn led to an interest in self-improvement as a practicing mentor. E-mentor challenges were reported in technology use, grading and self-perception of mentoring skills. However, other technological characteristics of the electronic medium noted as challenges in prior studies such as access, literacy, confidentiality and security did not surface.

These factors add to the body of knowledge on e-mentors by providing evidence of actual e-mentoring experiences, as reported by the practicing e-mentors, rather than conceptual assumptions.

Forecasting the future.
As technology and the nature of the distanced, interactive medium develop, the model of e-mentoring and its effect on e-mentors will evolve. A fully developed concept of e-mentoring, complete with parameters, constructs and outcomes may be difficult to attain because of the fast pace of both technology and organizational change. These changes will provide different experiences for practitioners and different opportunities for researchers.

Practitioners will need to design flexible schemes for e-mentoring and be sensitive to the developmental outcomes of all parties, including the e-mentors. Mentoring as a practice may evolve into a blended mentoring scheme wherein both face-to-face and electronic forms of communication are used, or used interchangeably by the parties. A blended mentoring scheme may involve a choice of interchange and exchange between mentors and protégés. This may require designers to think holistically as well as less prescriptively when creating operational e-mentoring schemes.

Researchers will be presented with further areas of study as the outcomes of the developing e-mentoring model change and evolve. Further research might involve similar e-mentoring schemes designed with similar structural constructs, but differentiated in e-mentor schema components such as pairing, duration or training. Additionally, researchers might further investigate self-perceived benefits of e-mentoring occurring from e-mentor self-reflection. Continued evaluation of e-mentoring and its outcomes for e-mentors will aid in understanding critical aspects of the e-mentoring process and in identifying areas for improvement.

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