

5-2009

Factors Affecting the Effectiveness of eMentoring Program in Non-profit Organizations

Peter Knight

University of Wisconsin-Parkside, knightp@uwp.edu

Weijun Zheng

University of Wisconsin-Parkside, zheng@uwp.edu

Follow this and additional works at: <http://aisel.aisnet.org/mwais2009>

Recommended Citation

Knight, Peter and Zheng, Weijun, "Factors Affecting the Effectiveness of eMentoring Program in Non-profit Organizations" (2009). *MWAIS 2009 Proceedings*. 10.

<http://aisel.aisnet.org/mwais2009/10>

This material is brought to you by the Midwest (MWAIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in MWAIS 2009 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Factors Affecting the Effectiveness of eMentoring Program in Non-profit Organizations

Peter Knight

University of Wisconsin-Parkside
knightp@uwp.edu

Weijun Zheng

University of Wisconsin-Parkside
zheng@uwp.edu

ABSTRACT

eMentoring is a means of providing a guided mentoring relationship using online software or email as the primary means of communication. The use of eMentoring program involves careful matching of mentors and mentees. This research intends to empirically examine important factors affecting the effectiveness of eMentoring program in non-profit organizations, in particular, the role of matching in the adoption and success of eMentoring program. The research is ongoing at a mid-western US elementary school which has launched a successful eMentoring initiative for two years. The extended abstract here reports the literature review, hypotheses and methodology for our study.

Keywords

eMentoring, matching of mentors and mentees

INTRODUCTION

Technology-driven initiatives and electronically delivered programs are revolutionizing how we work and learn. Developments in telecommunications, in particular, have led to an explosion in online instruction. eMentoring is a means of providing a guided mentoring relationship using online software or email as the primary means of communication.(Wikipedia, 2008). The communication environment provided by eMentoring is flexible and independent of time and space, thus extending mentoring opportunities to many more students and mentors free from time and geography constraints to participate (Single and Muller, 1999). As a result, eMentoring can alleviate a major obstacle to the development of mentoring relationships(Boyle and Boice, 1998). In addition, because of the time-delayed nature of the communication in eMentoring, the respondents have time to consider message content and provide more reflective responses (Ravet & Layte, 1997).

Due to those advantages, eMentoring began to gain popularity around 1993 and is now widely recognized throughout the US, the UK, and some parts of Europe. Currently, eMentoring is used most frequently to pair K-12 students with adult community volunteers who provide remedial curricular support and guidance on life skills, frequently focusing on disadvantaged youth or youth with disabilities. eMentoring is also used to support novice practitioners such as teachers and scientists and to create mentor/mentee relationships between industry leaders and college students to provide the latter with advice and support regarding successful transition into the work world. Given that during the last decade and a half, approximately five million youth are involved in school and community-based mentoring programs nationwide (McLearn, Colasanto, Schoen, & Shapiro, 1999), the adoption and diffusion of eMentoring program has the potential of tremendously impacting mentoring practice.

Systematic understanding of influential factors is undoubtedly necessary to successfully implement eMentoring program. However, it is under-researched in eMentoring literature so far. One factor that is particularly important to the design of successful eMentoring program is the matching of mentors and mentees(McDonough, Jastrzab, Sipe, and Rappaport ,2002). Prior research suggested matching of mentor and mentees could be conducted by gender, race, or personality (Gilmour, 1983; Kreps, 1987; Walker, 1985, Daresh and Playko, 1992, Thomas, 1993). However, a comparative evaluation of various matching methods and their impacts to the effectiveness of eMentoring program has not been done in eMentoring literature.

The purpose of this research is set to compare various matching methods used in eMentoring program and examine the impacts of influential factors affecting the effectiveness of eMentoring use. Accordingly, we collect survey data from 70 pairs of mentoring/mentee relationships at a non-profit organization. The rest of the paper is organized as following: first, a through overview of eMentoring and its literature is presented. Our conceptual model and hypothesis is then proposed. The research methodology section then analyzes our data and discusses findings. At the end, we conclude the paper with implication for future research.

EFFECTIVENESS OF EMENTORING PROGRAM

There are many factors affecting the effectiveness of an eMentoring program. Among all of them, users' willingness to adopt the program is an very important first step. Unless users are willing to accept the technology, there will not be effective use of eMentoring program. As suggested by technology adoption model (TAM) (Gefen and Straub 2000; Venkatesh and Davis 2000), users are often interested in adopting a technology because of two beliefs: (1) the perceived usefulness (PU) of the new IT and (2) the perceived ease of use (PEOU) of the new technology. PU is a measure of the individual's subjective assessment of the utility offered by the new IT in a specific task-related context. PEOU is an indicator of the cognitive effort needed to learn and to utilize the new IT. Numerous empirical tests have shown that TAM is a parsimonious and robust model of technology acceptance behaviors in a broad variety of IT applications (for a summary of this literature, see Gefen and Straub 2000), across both levels of expertise (Taylor and Todd 1995b), and across countries (e.g., Rose and Straub 1998). Furthermore, even though considerable TAM research has examined IT acceptance in the context of work-related activity, the theory is applicable and has been successfully applied to diverse non-organizational settings (e.g., Agarwal and Karahanna 2000; Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. 1989), including e-commerce (Gefen and Straub 2000; Lederer et al., 2000).

While it is applicable to explaining the adoption of eMentoring, TAM model is a model about technology adoption. It does not directly address the effective use of a technology after adoption. A new technology can be adopted successfully, but that does not guarantee users' satisfaction in their use of the technology. Furthermore, existing TAM research tends to explain how people make their adoption decision when they run into a new technology. It does not address the interaction among people and how that interaction affect people's use of the technology. However, the effectiveness of an eMentoring program does not only rely on mentors and mentees' willingness to use the program, it is also determined by the matching of mentors and mentees. Matched pairs of mentors and mentees are believed to be more effective, while not matched mentors/mentees will less likely work out eventually no matter how valuable and ease to use the eMentoring program is perceived by both mentors and mentees (McDonough, et al., 2002). Although the technical capability of eMentoring program hardly determine whether mentors or mentees will form matched pairs, well designed eMentoring programs are expected to facilitate the matching process, and help mentors and mentees to find their matched counterparties.

MATCHING DESIGN OF EMENTORING PROGRAM

Today's eMentoring platforms designed to pair adult mentors with K12 aged mentees have developed a variety of formats. Typically, mentors and mentees can be paired by gender, race and personality.

Matching by Gender

Numerous studies (Kram, 1985; Cohen and Galbraith, 1995) have been carried out to determine the ideal matches of mentors of mentees according to gender. For example, Follon (1983) studied whether or not women necessarily need to be mentored by other women in order to make such relationships effective. The premise of this research was generally that matching by gender provides for a greater likelihood of sharing common interests and communication styles. These studies of gender differences generally indicate that women prefer to have women as mentors, but there are no clear suggestions that women necessarily make better mentors to female mentees.

Matching by Race

There is little consensus about how to treat race when pairing mentors and mentees. In fact, according to Wallace (1994) there has been little research done to support any practices, and the arguments for and against cultural matching are to some degree "ideological premises based on beliefs rather than research" (p. 25). Some developers of eMentoring programs argue that mentees should be matched with a mentor of the same race. For example, Thomas (1993) examined mentoring relationships between black and white managers and found that racial similarity helped the mentoring process occur more smoothly. He further concluded that, when white managers felt anxious about cross-racial differences, as a pair they were unable to connect and the protégé, the individual that is supposed to gain the most out of the relationship, loses out on a valuable experience (Thomas, 1993). However, other mentoring program researchers (Southward, 1999) feel that cross-race matching is necessary to benefit all of society and that matching mentors with protégés of different racial backgrounds may help white participants overcome the negative stereotypes of blacks and that black participants may change their conceptions of whites. There is also a third view, which suggests that mentor-mentees matching by race should not be a priority over the individual's development (Furano, Phoebe, Melanie, & Alvia, 1993) and that traits such as understanding, non-discriminatory attitudes and good listening skills were more important. In 1993 the Big Brother/ Big Sister Association conducted evaluations of their programs, which are based on the concepts of mentoring, and looked at the issue of race in the relationships. They found that "minority youth in same-race matches and those in cross-cultural matches were equally likely

to have met with their Big Brother or Big Sister during the study period, and their rates of interaction were also similar” (Furano et al., 1993)

Matching by Personality

In addition to gender and race, another broad category of approaches to effective mentor-mentees matching is based on personality types or other psycho-social characteristics of the mentor and the mentees. Daresh and Playko (1992) have devised a scale by which they match up personality types which they believe complimentary in mentor/mentee relationships. In their study, participants are surveyed and based on the results classified as supportive, directive, facilitative or scientific personality styles and optimal matches are suggested based on the classifications of mentors and mentees. The four basic behavioral styles in their study, regardless of whether they are classified as mentors or mentees are as follows:

Supportive Style: This style demonstrates a high degree of respect for interpersonal relations. Individuals who possess this style try to minimize conflict and promote the happiness of everybody. Some people see the supportive style as accommodating and friendly, while others might view it as “wishy-washy.” Those who are supportive tend to do whatever may be needed to please others, but this may leave them frequently overcommitted. Supportive types are highly people-oriented individuals who will generally rely on others to give directions about how to get tasks done.

Directive Style: Individuals who demonstrate this style love to run things and have others do the job their way. These people are viewed as highly businesslike and efficient by some, while others view them as threatening and unfeeling. These people want to make sure that the job gets done, and they get impatient with lengthy descriptions about effective process.

Facilitative Style: Facilitators tend to get involved with people in active, rapidly changing situations. They are seen as socially outgoing and friendly, imaginative and vigorous. Some view this style as dynamic and energetic while others perceive the same behavior as highly egotistical. These individuals tend to be viewed as highly creative people who are also likely to generate ideas with little practical follow-through or concern for details.

Scientific Style: This style places great emphasis on problem solving and conceptual skills. Those who approach issues in this style tend to want much data before they make any decisions. As a result, they are viewed by others as methodical and thorough, although this behavior might frustrate some who look at their behavior as too slow.

According to Daresh and Playko (1992), optimal mentor/mentee matches were as follows:

Table 1. Optimal Mentor/mentee Matches by Personalities

	Mentee-Supportive	Mentee-Facilitative	Mentee-Directive	Mentee-Scientific
Mentor-Supportive		x		
Mentor-Facilitative			X	
Mentor-Directive	x			
Mentor- Scientific				X

The Influences of Frequency and Depth of email exchange

In addition to PU, PEOU, and matching of mentor and mentees, the successful adoption of eMentoring program may also be affected by the frequency and depth of interaction between mentors and mentees. McDonough, et al. (2002) found that mentors and youth are most satisfied with their experience and report having closer relationships when communication occurs regularly, frequently and in depth. They found that 75 percent of the pairs who agreed they had a positive relationship communicated at least once a week. The TAM model (Geffen and Straub 2000) would suggest that the likelihood of more frequent and depth of communication is enhanced when PU and PEOU are high.

RESEARCH HYPOTHESES

Based on those previous research reviewed earlier, we modified TAM model to hypothesize on the adoption of eMentoring in non-profit organization settings. We argue that matching of mentors and mentees plays an important role in influencing PU and PEOU, and frequency and depth of communication in eMentoring adoption, which ultimately will affect users’ satisfaction of eMentoring program. In addition, we also propose that matching of personality can be a superior method to assure both mentor and mentee satisfaction with eMentoring programs than matching by race or gender. Our major hypotheses include:

H1: PU, the perceived usefulness, will positively affect intended use of an eMentoring platform .

H2: PEOU, the perceived ease of use will positively affect intended use of an eMentoring platform .

H3: PEOU will positively affect PU of an eMentoring platform.

H4: Matching of mentors and mentees by personality will positively affect intended use of an eMentoring platform .

H5: Matching by personality will lead higher mentor and mentee's satisfaction with eMentoring programs than matching by race or gender.

H6: Both mentors and mentees will report higher satisfaction (as measured by items listed above) with an eMentoring program where emails are more frequent and in depth

The above hypothesis can be described by the model below:

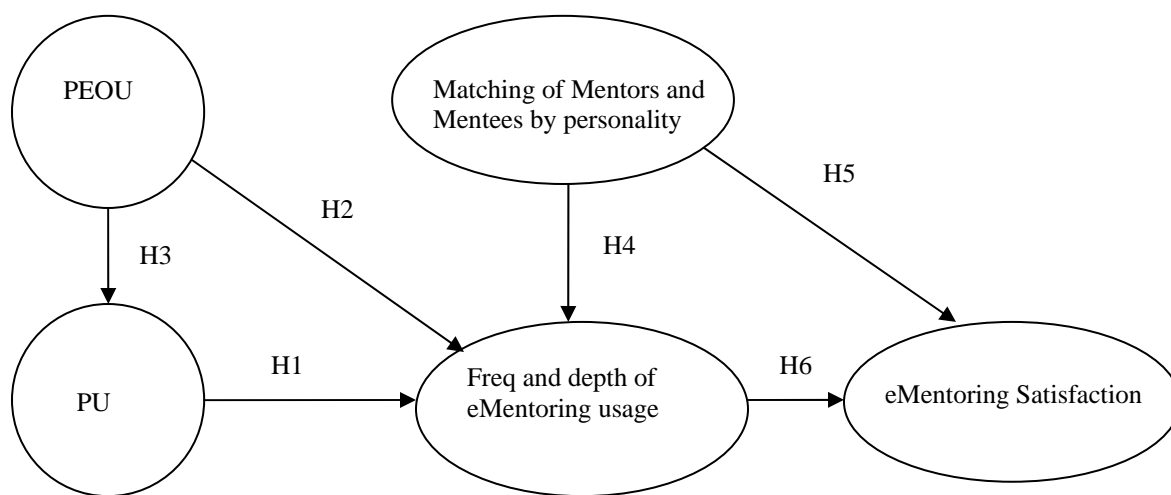


Figure 1. Model 1 Determinants of eMentoring Satisfaction

METHODOLOGY AND EXPECTED RESULTS

The study is currently ongoing with a target at an eMentoring initiative at a mid-western US elementary school. Now in its second school year, this program pairs 70 eMentoring volunteers with 70 5th grade students. As of this writing, a focus group of ementors and the program administrator has been completed to inform the survey instrument. Next, the researchers will conduct a survey among 70 mentors using the eMentoring program. In our survey, each of the constructs in Figure 1 will be measured by at least three indicators. The indicators are based on both previously validated questions (Geffen and Straub, 2000) and newly constructed ones derived from an extensive review of constructs proposed by others (McDonough, et al. , 2002; Daresh and Playko, 1992). Typically, for structural equation modeling, three is acceptable and common practice, two is problematic, and with one measurement, error cannot be modeled (Garson 2006), though where necessary, single indicators can be included in a model in small numbers. Models using only two indicators per latent variable are more likely to be under identified and/or fail to converge, and error estimates may be unreliable. For reasonably large samples, when the number of Likert categories is four or higher and skew and kurtosis are within normal limits, use of maximum likelihood estimation (the default in SEM) is justified (Kline 2005).

REFERENCES

1. Agarwal, R., Karahanna, E. (2000), "Time flies when you're having fun: cognitive absorption and beliefs about information technology usage", *MIS Quarterly*, Vol. 24 pp.665-94.
2. Boyle, P., & Boice, R. (1998). Systematic mentoring for new faculty teachers and graduate teaching assistants. *Innovative Higher Education*, 22, 157-179.

3. Cohen, N.H and Galbraith, M.W. (1995) "Mentoring in the Learning Society" in Cohen, N.H and Galbraith, M.W (eds) *Mentoring: New Strategies and Challenges* (Summer 1995, Vol. 66, pp.15-31) San Francisco, Jossey Bass Publishers
4. Daresh, J.C. & Playko, M.A. (1992, April). A method for matching leadership mentors and protégés. Paper presented at the annual meeting of the Association for Supervision and Curriculum Development, New Orleans, LA. (ERIC Document ED 344 315)
5. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology," *MIS Quarterly* (13:3) : 319-340
6. Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models, *Management Science*, (35:8), 982-1003
7. Follon, S. (1983). *Role models and mentors: A study of the career patterns of women in higher education*, Doctoral Dissertation, Drake University, Dissertation Abstracts International, 44(03), 681
8. Furano, Kathryn, Phoebe A. Roaf, Melanie B. Styles, & Alvia Y. Branch (1993) *Big Brothers/Big Sisters: A Study of Program Practices*, Philadelphia: Public/Private Venture
9. Garson, D. (2007), *Testing of Assumptions, Key Concepts and Terms*, available at: www2.chass.ncsu.edu/garson/pa765/assumpt.htm (accessed 2 Jan 2009),
10. Geffen, D.& Straub, D.W. (2000), "The relative importance of perceived ease of use in IS adoption: a study of e-commerce adoption", *Journal of the Association for Information Systems*, Vol. 1 No.8, pp.1-30.
11. Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling*, 2nd Edition: N.Y.: Guilford.
12. Kram, K.E. (1985). *Mentoring at Work*, Glenview, Scott Foresman and Company
13. Lederer, A. L., Maupin, D. J., Sena, M. P., and Zhuang, Y. (2000). The Technology Acceptance Model and the World Wide Web," *Decision Support Systems* (29:3) : 269-282
14. McDonough, H., J. Jastrzab, C. Sipe, & C. Rappaport, (2002) *Mentoring, EMentoring, and At-risk Youth Literature Review: Final Report*, prepared by Abt Associates, Inc., for The Foundation for Civility.
15. McLearn, K.T., Colasanto, D., Schoen, C., & Shapiro M.Y. (1999). Mentoring matters: A national survey of adults mentoring young people. In J.B. Grossman (Ed.), *Contemporary issues in mentoring*. Retrieved April 8, 2002, from http://www.ppv.org/content/reports/issuesinmentoring_pdf.html.
16. Ravet, S., Layte, M. (1997), *Technology Based Training*, Kogan Page, London,.
17. Rose, G., & Straub, D. (1998), "Predicting IT use: applying TAM to the Arab world", *Journal of Global Information Management*, Vol. 6 pp.39-46.
18. Single, P. B. and Muller, C. B (1999). *Electronic Mentoring: The Next Frontier for Supporting Women's Professional Development*, unpublished manuscripts
19. Thomas, D.A. (1993). Racial dynamics in cross-race developmental relationships. *Administrative Science Quarterly*, 38, 169-194.
20. Taylor, S., & Todd, P. A. (1995) Understanding Information Technology Usage: A Test of Competing Models," *Information Systems Research* (6:2), 144-176
21. Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, (46:2), 186-204.
22. Wallace, J.M. (1994). *The controversy of cultural matching: It's significance within a mentoring framework*. Master's thesis, University of California, Davis. (ERIC Document ED 372165)