

Chapter XXV

Outcomes of Computer Mentoring

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ABSTRACT

This study examined the effect of computer-based videoconferencing and text-based chat on mentoring relationships, and compared the findings to those of face-to-face and telephone interactions. The results of this study indicate that protégés in all communications conditions found the mentoring to be satisfying and helpful in reducing stress. The amount of variability assigned to communication mode was negligible, especially when compared to the amount of variability attributable mentors, suggesting that efforts to implement online mentoring should focus on training mentors, rather than on concerns over communication mode effects. The authors hope that these findings will help organizations in implementing online mentoring, as well as encouraging researchers to expand on the findings of this study.

INTRODUCTION

The study described in this chapter was designed to examine the effect of computer-based videoconferencing (VTC) and electronic text-based chat (TBC) on mentoring relationships, and is unique in that the experimental design allowed for: (a) direct manipulation of communication mode, (b) establishment of clear temporal precedence, and

(c) control over variables that could have served as potential confounds, such as the length of the relationship, the frequency of interaction, and the hierarchical level of the participants.

Collaboration implies two or more people working together in order to accomplish a project or goal. One form of collaboration is mentoring—a relationship in which mentors and protégés work together to develop the skills and knowledge of

the protégé. Mentoring is typically considered a face-to-face activity. For a number of reasons, such as increased knowledge specialization and the globalization of the economy, the degree to which such interactions will occur without participants meeting face-to-face is likely to increase.

Current examples include: (a) Bpeace, a volunteer organization that helps women entrepreneurs in war-torn regions such as Rwanda develop businesses, in part through distance mentoring in business practices, finance, and marketing (Bidforpeace, 2007); and (b) Covance, one of the world's largest drug development services companies, which uses distance mentoring to promote development for global managers (Darmstadter, 2006).

BACKGROUND: COMMUNICATION MODE

Different communication modes vary along the dimensions of sequentiality, audibility, visibility, copresence, simultaneity, and coterporality (Clark & Brennan, 1991). These dimensions and their influence on communications are discussed in the following sections.

Cotemporality, Simultaneity, and Sequentiality

Cotemporality refers to whether a message is received at the time it is sent (i.e., synchronous communication). *Simultaneity* means that the communicators can send messages at the same time, and *sequentiality* means that participants' messages stay in sequence. These three media characteristics regulate the flow and continuity of conversation. Without these attributes, the logical sequence of discussions becomes disjointed, and as a result, the psychological distance between communicators increases, discussion comprehension is reduced, and group members are less satisfied (Hambley, O'Neil, & Kline, 2007; Hughes, Wickersham, Ryan-Jones, & Smith, 2002).

Visibility and Audibility

Both visibility and audibility generate effects on communication through nonverbal cues such as eye contact, hand gestures, facial expression, tone of voice, laughter, and stress patterns. These cues aid in message assessment, production, and comprehension (Driskell & Radtke, 2003; Hidalgo & Massaro, 2007), and provide information, regulate interaction, and express intimacy (Derks, Bos, & Grumbkow, 2007). As a result, one of the primary functions of nonverbal cues is to reduce psychological distance (Hambley et al., 2007; Short, Williams, & Christie, 1976).

Co-presence

Copresence refers to participants located in the same physical setting; however, the effect of copresence is to make the dyadic partner more salient, more "real," an effect that Short et al. (1976) called "Social Presence." Social presence is a critical component of satisfaction with communication; for example, students' perceptions of social presence in online courses are related to their perceived learning and satisfaction with their instructor (Richardson & Swan, 2001).

BACKGROUND: MENTORING OUTCOMES

A number of different outcomes are related to mentoring; for the purposes of this study, the outcomes of interest were stress, satisfaction with the relationship, and learning. With regards to stress, Allen, McManus, and Russell (1999) investigated stress and peer mentoring in an academic setting, and found that the amount of perceived mentoring protégés received was related to protégés' beliefs that their mentors had helped them deal with stress. Sosik and Godshalk (2000) found that protégés who perceived receiving greater amounts of mentoring reported less job-

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