The Mentoring Effects in Use of New Technology Systems

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Abstract. A less than successful implementation of ERP system can be a disaster or for organizations, at least, a hug setback. Hence, industry put great efforts searching solution to ensure a success of implementation of new ERP system. On the other side, mentoring, has long came to be recognized as an effective manageable tool to build and share core competent knowledge within corporate. A familiar user of a new enterprise information system may require the transmission of exhaustive business knowledge for the use of new technology. It may alter the methods of training used in inculcating a particular skill. There is, however, only very limited research addresses to the effects of mentoring on new ERP system implementation. This paper argues that mentoring can play an important role in affecting user satisfaction and intention to continue use. The research result showed mentoring does play a significant moderating role between high and low mentored groups.

Introduction

One of major new technology systems for company is Enterprise Resource Planning (ERP) system. The ERP system has attracted much attention from both academic researchers and industry executives, no doubt because its implementation and maintenance require many resources, and its success or failure seriously affects the enterprise. More often than not, however, ERP stories do not end happily. Dell Computers spent US$10 million on an ERP system, but two years later use of the system had been discontinued [1]. Dow Chemical employees decided to stop using their ERP system because it was overloaded with add-on programs [2]. Applied Material users claimed the organizational changes required by the new ERP system were simply too overwhelming, so they cast it aside [3]. Boeing, Mobil Europe, and Hershey are also reported to have failed in their ERP implementations [4].

In all, approximately 20% of ERP adoptions end in discontinuation of use [4]. The mentoring approach has been widely adopted for knowledge building, sharing, and to help employees become acquainted with new environments, and to improve their job performances. Siemens mentoring system is a famous success story. Siemens firmly maintains the leading edge in the semiconductor and telecommunications industries by using a mentoring system for internal transfer of core technology and knowledge [5]. Mentees perceived mentoring as useful and effective in their performance of their job [6, 7], and tended to continue to enjoy that advantage [8].

Mentoring impacts users’ perception of the usefulness of a new technology system with regard to satisfaction with and intention to continue use is evident from much research [7, 9-11]. Peltier et al. [7] reported that mentoring positively impacts students’ perception of the usefulness of using an online course system. Eom et al. [10] reported that mentoring positively impacts mentees’ satisfaction with e-learning courses. Sykes et al. [11] argued that facilitation by a mentor positively impacts system usage.

The findings presented in this research argue that mentoring can significantly improve intention to continue ERP systems. At an average ERP implementation cost of US$2.3 million, and considering the cost involved in re-implementation, mentoring should be a very attractive option if it is effective. Mentoring is not only cheaper than renovating systems, but also transfers and spreads core competencies and knowledge among parties involved.
Literature Review

Ragins and Kram [8] proposed that mentoring could help employees learn through the use of two supporting activities of psychosocial and vocational. For psychosocial activities, mentor exercise of care and concern, and entering into relationships to share experience. For vocational activities, mentor coaching in the use of skills, assigning challenges, and providing resources. Role modelling often involves both types of activities. Scandura [12] asserted that role modelling is the most important method of mentoring for mentees to learn success patterns.

Through imitating successful role models, mentees can effectively learn professional skills, improve their job performance, and increase their satisfaction and intention to continue. [8, 12]. Robbins and Judge [13] argued that mentoring functions, including providing role models, vocational career guidance and personal learning, significantly stimulate job performance, satisfaction and intention to continue doing the same things. The conclusions of the research are summarized in Figure 1.

Research Model and Hypotheses

This research proposes a model of mentoring moderated IT system success with intention to continue produced by combining mentoring theory with perceived usefulness, satisfaction and intention to continue. Figure 2 illustrates the research model of mentoring moderating perceived usefulness, satisfaction, and intention to continue with ERP systems.

H1: Perceived usefulness is positively correlated with satisfaction
H1m: Mentoring moderates the correlation between perceived usefulness and satisfaction.
H2: Perceived usefulness is positively correlated with intention to continue using.
H2m: Mentoring moderates the correlation between perceived usefulness and intention to continue.
H3: User satisfaction is positively correlated with intention to continue.
H3m: Mentoring moderates the correlation between satisfaction and continuance intention.

Model Analysis and Results

Data Collection

The sample population in this study included the ERP end-users working for Taiwan based companies whose ERP systemic software is manufactured by SAP, Oracle and Tiptop. The ERP implemented customer lists were provided by consultant firms IBM consulting, HP consulting,
Abeam consulting, and Accenture. The sampled companies were limited to those who had completed their ERP system implementation within the previous four years.

800 questionnaires were disturbed and 382 responses were collected. The remaining 400 valid questionnaires yielded a valid return rate of 47%.

**Research Model Analysis**

Figure 3 presents the default model of perceived usefulness, satisfaction, and intention to continue model. The correlation coefficient from perceived usefulness to satisfaction was 0.64 at p<0.001, while from perceived usefulness to intention was 0.57 p<0.001, from satisfaction to intention was 0.32 p<0.001. The regression coefficient was significantly positive, supporting hypotheses H1 and H2 and H3.

The moderating effects of mentoring were tested with regression coefficients among perceived usefulness, satisfaction, and intention to continue through different intensity mentoring groups. Mentees were grouped into high-mentored and low-mentored groups, as was proposed by Baron and Kelley (1986) to measure the moderating effects.

Following Kline’s [14] approach, this study tests the variants of correlations between perceived usefulness and satisfaction for high-mentored and low-mentored groups. The un-standardized regression coefficients between perceived usefulness and satisfaction were 0.63 and 0.35 for the high-mentored and low-mentored groups, respectively. The chi-square differentiation per degree of freedom was 5.69 at P= 0.017 < 0.05, showing significantly different correlations in the two groups. Hence, hypothesis H1m was supported.

**Discussion**

The results of this study show that mentoring moderates the relationships between perceived usefulness and satisfaction, and between perceived usefulness and intention to continue. The regression coefficient between perceived usefulness and intention to continue was stronger in the high-mentored group than in the low-mentored group.

The research results show that mentoring moderates the correlation between satisfaction and intention to continue. The research result was consistent with the evidence discovered in other research [15, 16]. Their surveys revealed that high mentoring people exhibit a lower correlation between satisfaction and intention to continue than low mentoring people.

The possible reason for the moderating effect was that the intention to continue of high-mentored users predominately comes from perceived usefulness, rather than from satisfaction. With high perceived usefulness, users are ready and eager to take advantage of the system to advance their performance. High-mentored people receive more resources and attention from organizations, so are more likely to get promoted or job rotated [15]. People who expect to be promoted through performance advancement are satisfied with the system, rather to continue at the same position. On the other hand, a mentee receiving a low level of mentoring will be willing to continue only if the sum of his job performances plus the satisfaction he enjoys is high enough to persuade him to continue. Otherwise, the mentee receiving low levels of mentoring would have no intention to continue to use the system.
References


