E-mentoring: The adoption process and innovation challenge

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A R T I C L E   I N F O

A B S T R A C T

The innovative nature of e-mentoring along with its ongoing adoption process provided the reasons for conducting an innovation–adoption study on e-mentoring. A sample of 234 mentors that have been employed by Ergani Center, a well respected Greek mentoring organization, were asked to identify with the use of an online questionnaire the factors that influence the adoption of e-mentoring. Gender, age, personal innovativeness, relative advantage computer self-efficacy, problems and pressures from mentees emerged as predictors of the innovation process.

1. Introduction

Despite extensive research on the use and application of the Internet for mentoring purposes (e-mentoring) (e.g. Bonnett, Wildemuth, & Sonnenwald, 2006; DiRenzo, Linnehan, Shao, & Rosenberg, 2010; Ensher, Heun, & Blanchard, 2003; Headlam-Wells, Gosland, & Graig, 2006; Kasprisin, Single, Single, & Muller, 2003; Martin, Platis, Malita, & Ardeleanu, 2011; Rhodes, Spencer, Saito, & Sipe, 2006; Smith-Jentsch, Scielzo, Yarbrough, & Rosopa, 2008; Stewart & McLoughlin, 2007) no attention, to the best of our knowledge, has been given to the adoption process. Furthermore, it seems that the adoption of the Internet for mentoring purposes has been taken for granted, overlooking the fact that the implementation of e-mentoring was based on the adoption stage. That is why this paper, responding to Ensher et al. (2003) call for empirical research on e-mentoring, utilizes criteria associated with the adoption theory in order to offer some quantitative insights on this issue.

E-mentoring is a mentoring carried out through the use of the Internet as a communication channel and is otherwise referred to as 'online mentoring' or 'virtual' or 'cyber mentoring' (Stewart & McLoughlin, 2007). The adoption of the Internet for mentoring purposes could be considered as a continuous innovation process, deviating from traditional offline approaches, although the use of the Internet even in everyday working activities is now mainstream, since new methods and applications appear. This is particularly true for countries such as Greece and others in the Balkan region, where the diffusion of the Internet and the widespread use of new electronic applications lag behind other EU countries (Eurostat, 2011). Thus, the identification of factors that

affect adoption by mentors should provide valuable managerial and conceptual insights in order to better understand the diffusion process, and indeed the current state of affairs within a specific cultural context.

The use of Web 2.0 technologies and the success of social networks enabled a shift away from the Web as a passive information highway to a dynamic platform for the exchange of real communication, interaction and experiences (Pfeil, Zaphiris, & Wilson, 2009) leading to the effectiveness and expansion of e-mentoring practices. The classification of the Internet as a two-way symmetrical communication channel supports an egalitarian dialogic nature of e-mentoring programmes, since both mentors and mentees now have the power to initiate conversation and to maintain an active role in online discussions. E-mentoring supports the creation of a constructive feedback process through the use of detailed electronic records of interactions (Kasprisin et al., 2003; Stewart, 2006). Furthermore the elimination of obstacles such as (a) geographical barriers or time constraints, (b) the unavailability of suitable mentors, and (c) the incompatibility in social status, physical appearance, gender or behavioral expectations, increase collaboration, involvement, satisfaction and value of e-mentoring programmes (Bierema & Merriam, 2002; Ensher & Murphy, 1997; Ensher et al., 2003; Fagenson-Eland & Lu, 2004; Kasprisin et al., 2003; Single & Single, 2005; Stewart & McLoughlin, 2007). The impartiality granted by the Internet allows e-mentoring relationships to develop based on openness, honesty, trust and flexibility encouraging the disclosure of experiences that would not happen in a face to face physical encounter (Bierema & Merriam, 2002; Miller & Griffiths, 2005; Stewart, 2006).

However, e-mentoring is not an inexpensive alternative of face to face mentoring (Single & Single, 2005). Single and Single (2005) report that e-mentoring activities can present unique practical and technical challenges including the set up and maintenance of websites, monitoring the Internet and supporting real

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two-way communication. These challenges result in significant upfront or operational costs which are difficult to coordinate and manage. That is why e-mentoring is preferred in large scale projects where economy of size, availability of resources and gathering of expertise is achieved in contrast to face to face mentoring which is constrained to relatively small organizations (Kasprisin et al., 2003; Single & Muller, 2001). Such projects are the International Telementor Programme (www.telementoring.org) and MentorNet (www.mentornet.net). Moreover, the lack of additional information that body language and non-verbal communication adds to face to face mentoring requires experience in the use of electronic communication, since it makes e-mentoring procedures more vulnerable to misinterpretations and misunderstandings (Ensher et al., 2003; Stewart & McLoughlin, 2007). As a result, those relationships are characterized as "weak ties" and can lead to easily broken bonds (Rhodes et al., 2006). Finally, questions and fears are raised due to security and confidentiality issues, expressed by both mentors and mentees participating in e-mentoring programmes (Rhodes et al., 2006).

It is obvious that mentors and mentees today find themselves to be in the midst of a learning curve, since adoption of e-mentoring is a slow continuous process and their effort to maximize e-mentoring results comprises an ongoing challenge (DiRenzo et al., 2010). The advent of social software tools combined with Web 2.0 applications can maintain the social capital while at the same time foster informational, psychological and instrumental benefits, thus promoting e-mentoring programmes to relationship building tools. Based on the adoption theories of innovation, we try to shed light on the adoption of e-mentoring in an effort to accelerate its diffusion and enhance its effectiveness.

This paper is organized as follows: in Section 2 the theoretical background is described, in Section 3 the methodology is analyzed, in Section 4 results are presented, in Section 5 the discussion of the results is made, and finally in Section 6 the conclusions are offered.

2. Theoretical background

Since the practice of mentoring is bound by social, educational, economic and technological environs, it has been significantly affected by the exponential growth of the Internet and the advent of new Web 2.0 applications. Social software tools such as blogs, wikis, Facebook, Twitter, MySpace, YouTube, LinkedIn and dynamic websites leading to virtual worlds, along with the use of Skype and video conferencing provide powerful communication channels to support e-mentoring relationships. This facilitated the development of electronic relationships that could foster the informational, psychological and instrumental benefits provided by mentoring (Ensher et al., 2003; Single & Single, 2005). However, the extent to which all of the above tools are used in mentoring relationships varies significantly. In some occasions the use of any e-mentoring communication channel is totally avoided, while in others only a small fraction of the actual electronic capabilities is used. A possible explanation for that, according to the innovation literature, is because adoption and diffusion processes are not a one time instantaneous event affecting simultaneously all the participants (Kitchen & Panopoulos, 2010). Adoption is considered as the complete use of the innovation and not just the initial acceptance and use that usually follows its introduction (Parthasarathy & Sohi, 1997; Rogers, 1995). As a result, it is crucial to study and understand the factors that affect the adoption of e-mentoring in an effort to support and strengthen its use.

Rogers' innovation diffusion theory (1995) plays a significant role in the innovation technology literature (Al-Qirim, 2007; Cascio, Mariadoss, & Mouri, 2010; Kitchen & Panopoulos, 2010; Lynn, Lipp, Akgun, & Cortez, 2002). According to Rogers (1995) five innovation attributes coded as (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability can have a significant impact in the adoption process. Surry and Farquhar (1997) report that an innovation will present a high rate of adoption if (a) it appears a relative advantage, (b) it is compatible with the environment, (c) it is not complicated when used, (d) it can be tested before its official use and (e) the results that it produces are easily observed. However, Rogers' innovation theory cannot completely explain the innovation adoption process and it should thus be blended with other factors in order to provide a more holistic adoption model (Al-Qirim, 2007; Scaglione, Schegg, & Murphy, 2009).

The term 'relative advantage' describes the degree to which a new process is superior to the one used before and is positively correlated with the rate of adoption (Rogers, 1995). Many researchers in the field of e-mentoring have acknowledged the advantages of e-mentoring (DiRenzo et al., 2010; Ensher et al., 2003; Headlam-Wells et al., 2006; Rhodes et al., 2006; Single & Single, 2005; Stewart & McLoughlin, 2007). The fact that mentors acknowledge the positive aspects of e-mentoring toward traditional mentoring methods can lead to a faster and universal adoption of e-mentoring. Thus, the following hypothesis was formulated:

Hypothesis 1. The perception by mentors of the relative advantage of the use of e-mentoring will be positively correlated with the rate of e-mentoring adoption.

Compatibility, or the degree to which mentors understand the similarities between practicing traditional forms of mentoring and e-mentoring, is also positively associated with the rate of adoption (Rogers, 1995; Waarts, van Everdingen, & van Hillegersberg, 2002). Prior experience in traditional mentoring relationships can help mentors to more effectively handle on-line relationships since they come across the same discussion topics. In many cases, they can even replicate, up to a certain degree, face to face relations (DiRenzo et al., 2010; Ensher et al., 2003). In certain cases, e-mentoring activities can also be considered complementary to those that take place in the physical world, allowing mentors to perceive a level of compatibility. Complexity is negatively correlated with the rate of adoption, especially when a technological in nature innovation is examined (Pelz & Andrews, 1985; Rogers, 1995). Researchers do point out that e-mentoring relationships are more complex than traditional ones, requiring special training both in IT and in on-line communication (Rhodes et al., 2006; Stewart & McLoughlin, 2007). Therefore, the following hypotheses were proposed:

Hypothesis 2. Compatibility perceptions of mentors will be positively associated with the rate of e-mentoring adoption.

Hypothesis 3. Complexity perceptions of mentors will be negatively correlated with the rate of e-mentoring adoption.

Trialability (the ability to try) and observability (the ability to see the results of the innovation) are both positively associated with the rate of adoption (Rogers, 1995). Mentors who can practice e-mentoring in an experimental environment will be less reluctant once they actually have to use e-mentoring. Moreover, having the opportunity to observe the positive outcomes of e-mentoring can provide mentors with tangible proofs of its value, helping them to overcome any skepticism or fear. Based on the literature, the following hypotheses were proposed:

Hypothesis 4. Trialability will be positively correlated with the rate of e-mentoring adoption.

Hypothesis 5. Observability will be positively associated with the rate of e-mentoring adoption.

The construct of personal innovativeness represents a mentor's persisting tendency to innovate (Agarwal & Prasad, 1998; Midgley