Computers in Human Behavior 28 (2012) 840–848

Contents lists available at SciVerse ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

The mediating effect of website quality on Internet searching behavior

Li-An Ho [a], Tsung-Hsien Kuo [b], Binshan Lin [c,*]

[a] Department of Educational Technology, Tamkang University, New Taipei City, Taiwan
[b] Department of International Business Administration, School of Continuing Education, Chinese Culture University, Taipei, Taiwan
[c] College of Business Administration, Louisiana State University in Shreveport, LA, USA

ARTICLE INFO

Article history:
Available online 30 December 2011

Keywords:
Internet attitudes
Website quality
Internet searching behavior

ABSTRACT

The study investigates the mediating effect of website quality on Internet searching behavior. The research model incorporates three dimensions, namely (1) Internet attitudes of the Internet users, (2) website quality, including the system quality, service quality and information quality, and (3) Internet searching behavior demonstrated by the general population of Internet users. A survey instrument was used to gather data to exam the relationships in the proposed model. The collected online surveys (n = 856) are used to test the relationships among the three dimensions expressed in the proposed structural equation model. The results show that website quality has a mediating effect on Internet searching behavior. It is also discovered that there is significant correlation between Internet attitudes and website quality. This study contributes empirical data to the predominantly theoretical literature on Internet searching behavior in general and Internet attitudes and website quality in particular. It is, to a certain extent, common sense that website quality has a positive impact on Internet searching behavior. This paper takes an important step forward by detailing how website quality affects the Internet searching behavior via enhancing the effect of users' Internet attitudes.

1. Introduction

Information continues to become more tightly integrated as well as interchangeable ever since Tim Berners-Lee invented the World Wide Web (WWW). Along with the coming era of Internet, people spent more and more time on the Web, gaining more information from the Web unconsciously. According to a national survey conducted locally by Taiwan Network Information Center (2010), the percentage of people in Taiwan with age of 12 and above who have used the Internet in the recent half year is 72.56 (i.e. 14,670,000 people). Compared with the results from the previous Internet usage surveys, the number of people who have used Internet is increasing year by year. As of January 2010, there are a total of 162,200 thousand people (0–100 years old) who have used the Internet. These people log on to the Internet from their residences the most, from work the second, followed by schools and net cafés. Nearly 60% of users use the Internet approximately 4 h a day. These facts indicate that Internet has become an important part of people's lives in Taiwan. According to Taiwan Network Information Center's research, increasing number of people in Taiwan spend more and more time on the Internet for multiple purposes. The top three functions of the Internet were searching for information, browsing information or websites, and e-mailing.

Nevertheless, while we can learn from Taiwan Network Information Center a significant amount of demographical facts about Internet usage in Taiwan, we still do not know what affects the users' Internet usages, or their behaviors. There are a number of local studies which explored people's online behaviors (e.g. Chang, 2006; Wang, Chen, Lin, & Wang, 2008), however, none of them focused on what influences people to log online and do whatever they do. Močnik and Širec (2010) explained the intensified usage of Internet from a technological as well as a socioeconomic point of view. Their study concluded that the strongest positive and most significant impact on Internet use was the information and communication technologies infrastructure and the user's capabilities. Analysing the Malay youth population, Hasim and Salman (2010) discovered that interpersonal and social network, as well as security concerns are the two major issues which influence the young people to use the Internet. Susskind and Stefanone (2010) proposed that the lack of responsiveness of the Internet was positively related to general Internet apprehensiveness, which was negatively related to users' online information-seeking behaviors.

As Internet continues to influence our lives intensively, it is evident that a number of factors must be considered in understanding why individuals use Internet. The above literature suggest that there are two major factors influencing Internet searching behaviors in general, namely Internet attitudes (the psychological part that may affect one's feeling toward Internet usage) and website quality (the physical part that one may expect from the Internet and may affect one's feeling toward Internet usage). The purpose

* Corresponding author. Address: BE321, Louisiana State University in Shreveport, Shreveport, LA 71115, USA.
E-mail address: Binshan.Lin@LSUS.edu (B. Lin).

0747-5632/$ - see front matter © 2011 Elsevier Ltd. All rights reserved.
doi:10.1016/j.chb.2011.11.024

of this paper is to investigate the effect of user's Internet attitudes and website quality on their Internet searching behaviors. The key research question is "Do Internet attitudes and website quality influence Internet usages?" Our research model incorporates three dimensions, namely (1) Internet attitudes of the Internet users, (2) website quality including the system, service and information quality offered by websites on the Internet, and (3) Internet searching behavior demonstrated by a general population.

2. Literature review

This section reviews the literature to identify relevant practices comprising Internet attitudes, website quality and Internet searching behavior. The relevant hypotheses of the model are also presented.

2.1. Internet attitudes

Attitude in general refers to one's reaction towards someone or something. Attitude is intrapersonal, consisting of three components (Breckler, 1984; Taylor, Peplau, & Sears, 1997), namely affective, behavioral and cognitive components. Past studies agree that attitude is a state of readiness which is a particular reaction trend to a stimulus (Oppenheim, 1999). Oppenheim further differentiates attitude into four types based on its intensity. They are opinion, attitudes, values, or basic attitude or personality. Internet attitudes refer to one's general reaction towards Internet. Local studies often use Loyd and Loyd's (1985) Computer Attitude Scale (CAS), consisting of anxiety, confidence, likeness, and usefulness, in measuring Internet attitudes. However, existing literature presents a number of measures to evaluate Internet searching behaviors. For example, Donat, Brandtweiner, and Kerschbaum (2009) and Graff (2003) adapted Smalley, Graff and Saunders' scale, which consisting of cognition, affection, and behavior, to measure Internet attitudes. Zhang (2005, 2007) proposed an Internet attitudes scale which includes four components: enjoyment, usefulness, anxiety, and self-efficacy. Luan, Fung, and Atan (2008) suggested attitude towards Internet could be examined through the user's perceived usefulness, emotional response, and perceived control. Tsai, Lin, and Tsai (2001) applied four elements to measure Internet attitudes, namely perceived usefulness, affection, perceived control, and behavior. Internet attitudes can in fact be measured on different dimensions. However, various Internet attitude models appear to measure four major constructs, namely enjoyment, usefulness, anxiety, and self-efficacy (see Table 1). Table 1 summarises how each dimension of Internet attitudes models proposed by different researchers can be categorised into a general structure. From the result of the analysis presented in Table 1, it can be concluded that Zhang's Internet attitudes scale is the most comprehensive measurement.

2.2. Website quality

In an information-rich environment, people have access to almost any amount of information they require. However, a major issue of information technology is how to assist users in browsing, reading, acquiring, analysing and applying information constructively in an information-rich world (Ruiz-Mercader, Merono-Cerdan, & Sabater-Sanchez, 2006). It is apparent that nowadays technology can be seen as knowledge embodied in tools, which then help people to perform any type of human tasks (Kuo, 2009). For modern companies, proper investment in quality information technologies, such as the Internet, may support the management of information, operations of businesses and services to their customers or clients (Davenport, De Long, & Beers, 1998).

Table 1
The analysis of various models of Internet attitudes.

Construct	Factors/proposed researcher(s)
Enjoyment	• Enjoyment (Zhang, 2005, 2007) • Likeness (Loyd & Loyd, 1985) • Affection (Donat et al., 2009; Graff, 2003; Tsai et al., 2001) • Emotional response (Luan et al., 2008)
Usefulness	• Usefulness (Loyd and Loyd, 1985; Zhang, 2005 2007) • Perceived usefulness (Luan et al., 2008; Tsai et al., 2001) • Cognition (Donat et al., 2009; Graff, 2003)
Anxiety	• Anxiety (Loyd and Loyd, 1985; Zhang, 2005, 2007)
Self-efficacy	• Self-efficacy (Zhang, 2005, 2007) • Confidence (Loyd and Loyd, 1985) • Perceived control (Luan et al., 2008; Tsai et al., 2001) • Behaviour (Donat et al., 2009; Graff, 2003; Tsai et al., 2001)

But technology is not the answer to all the problems within companies. Fuller, Vician, and Brown (2006) argued that technology can either enhance or defeat business operations. Therefore the promotion of the use of information technology must be based on the user's perceived usefulness and ease of use (Money & Turner, 2004). Consequently, any quality information system, such as the Internet, must consider its accessibility to the end-users and thus must incorporate the goals, needs and preferences of the end users (Kim & Ong, 2005).

According to Kuo (2009), the quality of information systems is a multi-perspective entity whose dimensions represent the various interest groups of the systems. Prior studies have various interpretations in conceptualising the quality of information systems. For example, Lin (2010) suggested that quality information system must offer not only information but also system quality. Floropoulos, Spathis, Halvatzis, and Tsipouridou (2010) proposed a model arguing that the constructs of information, system and service quality, perceived usefulness and user satisfaction altogether form the base of a quality information system. Moreover, Boritz (2005) stressed that there are three major quality concepts of an information system, including information integrity, processing integrity and system reliability. DeLone and McLean (1992) suggested that system quality and information quality affect the use of information within the system as well as the user satisfaction. Pitt, Watson, and Kavan (1995) pointed out that DeLone and McLean's work ignored the service function of an information system, and thus added one element (i.e. service quality) to the model. Such three-factor model of information system quality (i.e., information quality, the system quality, and the service quality) has been adopted in a number of studies to assess various types of information system quality (e.g. Ho, Kuo, & Lin, 2010; Ho, Kuo, Lin, & Lin, 2010; Kuo, 2009).

2.3. Internet searching behavior

Nowadays, the most common Internet behaviors are social communication and information searching (Shah, Schmierbach, Hawkins, Espino, & Donavan, 2002). The information seeking process (ISP) is one of the important aspects of studying Internet behaviors. As Lu et al. (2008) pointed out, the Internet has become the most important information resources for people and that the Web offers people powerful means for searching information to facilitate their decision making and problem solving processes in their everyday life, personally or professionally. According to Kuhlthau (1999), ISP consists of six steps, namely initiation, selection, exploration, formulation, collection and presentation, and it involves interactive synergy among people's thoughts, feelings and actions. Ellis and Haugan (1997) proposed an information seeking model containing eight major online behaviors: starting, chaining, browsing, monitoring, differentiating, extracting, verifying, and ending, which are applicable to hypertext environments.