



Influence of faculty- and web portal design-related factors on web portal usability: A hierarchical regression analysis



Rex P. Bringula*

College of Computer Studies and Systems, University of the East, 2219 C.M. Recto Avenue, Sampaloc, Manila 1008, Philippines

ARTICLE INFO

Article history:

Received 25 January 2013

Received in revised form

4 May 2013

Accepted 6 May 2013

Keywords:

Age

Commitment

Information content

Portal

Usability

ABSTRACT

This study determined the influence of faculty- and web portal design-related factors on web portal usability. Descriptive statistics revealed that most of the respondents were in their early 40's, had Master's degree, had Internet access at home, were committed to the use of the web portal, had been using the web portal for more than 4 semesters, and were intermediate users. They perceived that it was evident that the web portal was designed in terms of ease of use, information content, availability, speed, and aesthetics. Both e-learning services and library online resources were only used from time to time. The fourth step of hierarchical regression analysis showed age could only influence web portal usability provided the users were committed to the use of the web portal. The last step revealed that age, commitment to the use of the web portal, and information content found to influence web portal usability. Thus, the fourth and fifth null hypotheses were partially rejected. It was concluded that commitment was a strong positive "force" that could push older people to use Internet technologies, and technical and non-technical aspects influence web portal usability. Implications were also presented.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

A website is one the best media in communicating the brand (Peterson, 2006; Won Jae, Green, Yong Jae, Seunghwan, & Schenewark, 2007) and mission (Peterson, 2006) of academic institutions. Prospective students could use the information found in the university website in deciding to apply in the university (Peterson, 2006). It also became a primary communication tool for students, parents, alumni, the community, donors, and funding organizations (Peterson, 2006). It is apparent that university websites can cater internal (i.e., current students, faculty, and staff) and external users (i.e., prospective students, faculty, and staff) (Padmannavar & Joshi, 2011).

The functions of university websites are redefined due to advancements in Information Technology (Tabata & Johnsrud, 2008). It became more dynamic and responsive on the demands of the academic community. University websites can now support learning. Teachers can now post course materials, verify students' class inclusion, administer students' class performance evaluation, and post grades online. Teachers and students can also communicate through forum or chat for a formal or non-formal discussion. This form of learning that eliminates the barriers of time and distance (Alenezi, Abdul Karim, & Veloo, 2010) is called e-learning or distance learning (Alenezi et al., 2010; Al-Shboul and Alsmadi, 2010; Chan and Tung, 2008; Dabbagh, 2001).

Consequently, the need for electronic forms of references, refereed articles, and other scholarly works for research, teaching, and instructional purposes emerge. Universities responded to these pressing needs by digitizing library resources. Libraries are now subscribed to electronic books (e-books), electronic journals (e-journals), magazines, newspapers, books, videos, DVDs, encyclopedias, streaming music and video, and other scholarly works which enable learners access these resources anytime and anywhere whenever an Internet connection and computer systems are available (Peterson, 2006; Rezaei Sharifabadi, 2006). The wide range of services and content available of digital libraries (Peterson, 2006) may lead to better academic research and work of both teachers and students (Rezaei Sharifabadi, 2006). It cannot be doubted that digital library services are an essential part of a quality e-learning system (Rezaei Sharifabadi, 2006).

Digital library resources and e-learning capabilities of a university website are now consolidated into a single internet access point — through a web portal. A web portal integrates information, content, and enterprise applications (Averweg, Erwin, & Petkov, 2008). This makes portal a single point of access on the World Wide Web (Averweg et al., 2008; Raza, Yoo, Kim, Joo, & Jeong, 2009).

* 1508 Fajardo St., Sampaloc, Manila 1008, Philippines. Tel.: +63 2 735 54 71x425.

E-mail addresses: rex_bringula@yahoo.com, rexbringula@gmail.com.

The University of the East (UE) in Manila is an institution of higher learning that utilizes the capabilities of a web portal. UE has alumni, academic, student, and faculty portals. The latter two portals have the facilities of supporting e-learning and providing library online resources. Fig. 1 shows a sample of the e-learning facilities and library online resources of a faculty portal. Fig. 1-a shows that a teacher can upload a lecture with a file size of up to 2 megabytes. It accepts Word, PowerPoint, pdf, and spreadsheet files. On the other hand, Fig. 1-b shows the search result for an e-book. Users can view the text or download a pdf copy of the searched e-book.

The optimum use of the UE faculty and student portals depends on the initiative of the faculty members to use the portal. Tabata and Johnsrud (2008) commented that the growth of distance education relies on the engagement of the faculty. They further explained that:

‘faculty are a critical and core resource to the success of any distance education initiative and facilitating understanding of university educators and policy makers as to the conditions that encourage or discourage faculty participation may assist in sustaining academic quality and integrity.’

Tabata & Johnsrud, 2008, p. 626

Zaharias and Poylymenakou (2009) also noted that poor design and usability issues were two of the reasons for non-use of e-learning facilities.

Thus, it is important to determine what facilitates the use of the e-learning facilities and digital library resources of teachers. In this way, the optimum use of the faculty web portal is achieved. Hence, the present study was conceived to answer the following questions: 1) What are the faculty-related factors in terms of age, highest educational attainment, length of use of the web portal, level of user experience, Internet access at home, and commitment to the use of the web portal?; 2) How do respondents perceive the web portal design-related factors in terms of ease of navigation, information content, availability, speed, and aesthetics?; 3) What is the level of usability of the web portal e-learning services and online library resources in terms of frequency of use?; and 4) Do faculty- and web portal design-related factors, singly or in combination, influence web portal usability?

2. Literature review

2.1. Faculty-related factors

Katsanos, Tselios, and Avouris (2010) commented that the heterogeneity of users' profiles make the design of a website difficult. One of the profiles to be considered is age because abilities of people change due to aging (Moreno, Castro, & Martinez, 2007) and in turn, it could influence the way a user uses a website (Banati, Bedi, & Grover, 2006). Unfortunately, this was not consistently considered in the development of websites (Moreno et al., 2007). As a result, the Internet was one of the technologies that can be difficult for older people (i.e., 60 years old and above) to use (Becker, 2005; Coyne & Nielsen, 2002 cited in Ownby (2006)).

Becker (2005) explained that vision, cognition, and physical impairments associated with aging process served as barriers in using the Internet. Physiological changes impact the ability to see web objects and read online content (Becker, 2005; Curran, Walters, & Robinson, 2007; Ownby, 2006), distinguish certain colors (Curran et al., 2007; Ownby, 2006), and see links on web pages (Ownby, 2006). Ellis and Kurniawan (2000) also pointed-out that fast-moving textual or graphical objects are not appropriate for older users. The changes in motor function such as the eye-hand coordination make it difficult for old users to use the mouse (Tse, Choi, & Leung, 2008) and keyboard (Ownby, 2006). Thus, mouseovers are inappropriate designs for older users (Curran et al., 2007).

Two studies established that age and level of education could influence website usability. Gagliardi, Mazzarini, Papa, Giuli, and Marcellini (2009) recruited forty-five elderly subjects (at least 65 years old) and disabled people (deaf, mute, blind, and with motor problems) to



Fig. 1. Faculty portal facilities.

Download English Version:

<https://daneshyari.com/en/article/348475>

Download Persian Version:

<https://daneshyari.com/article/348475>

[Daneshyari.com](https://daneshyari.com)