

Chapter 13

Knowledge Management for Web-Based Learning Systems

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ABSTRACT

There is very little knowledge about how different users learn on websites and retain that knowledge for doing tasks. Web-based systems characteristics may be an influencing factor that may positive or negatively impact user's attitude. In this research, users' experience with information explains how different users derive the knowledge to use the systems that forms the basis of interaction with the system.

1. INTRODUCTION

Web-based user services are generally perceived as being successful, but there has been little evaluation of how well the web meets its user's primary information requirements (D'Ambra and Rice 2001). The freedom and flexibility offered by the Internet allow users to connect to other websites of their interest and at the same time build upon their e-learning experience on the web. A number of researchers suggested that flow is a useful construct for describing interactions with websites (Csikszentmihalyi 1975; Johnson and

Mathews 1997; Zeithaml et al. 1993; Zeithaml et al. 2000; and Chea and Lou 2008). Flow has been described as “the process of optimal experience” (Csikszentmihalyi and LeFevre 1989) achieved when sufficiently motivated user perceives a balance between their skills and challenges of the interaction, together with focused attention (Hoffman and Novak 1996).

This study assumes that user's experience with information already exists in the traditional environment (i.e., offline). Understanding the traditional learning complexities of user experience with information and transforming it to the

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web-based environment is a challenge for both practitioners and researchers. The dimension and scale of such complexity in terms of technology and its alliance with information may provide an integration point where technology requirements may meet with the user's learning experience. Defining user learning experience with information is not an easy and straightforward process. Rather developing an approach to studying the learning experience process on the basis of web-based learning and user interaction is suggested. This paper specifically investigates issues related to user learning experiences in web-based learning adoption and the process involving continued use of web-based learning services. With technology constantly changing it will subsequently have an effect on the user's learning experience and perception.

User information experience in web-based systems learning is an important area that is gradually growing with introduction and adoption of web-based technology (i.e. WebCT, Firstclass, and Blackboard). The information available in web-based systems learning may be one of the determinants which direct the user in achieving the desired objectives that form the purpose of using the system. The user information requirements may be based from prior experience in similar or related traditional learning environment. Information search form the initial need in the activity to achieve the desired objectives, and hence the acquisition of information experience process. Information if not available to users in e-learning or traditional learning environments may direct the user in adopting the search process based on experience.

User's engaged in web-based learning activities tend to focus on prior information experience and perception, especially from the offline environment. The effect of information on user experience in web-based learning on first time user's compared to the frequent user's will vary,

a user with no experience can form high (or low) perception, especially via word of mouth communications. Such perceptions may behave differently from those developed via experience. Davidow and Uttal (1989) suggest user's expectation is formed by many uncontrollable factors, from the experience of user's... to a user's psychological state. It is argued that a user web-based learning experience is formed and based on wider range of prior experiences that may be recalled or narrowed in a similar situation. The flow of information over the Internet is faster and communication between user's leads in enhanced learning. Understanding user's web-based learning experience and perception solely on the basis of online or offline experience would tend to limit the research dimension; rather a combination approach is adopted.

The concept of flow is important because it has a clear set of antecedent conditions and consequences that have implications for web-based learning forming part of users knowledge management. User's information experience on a website, its impact, retention of that web-based learning experience can be related to the flow concept. For the flow state to be experienced the user must perceive skills and challenges to be in balance and above a critical threshold and the user must be paying attention. That is a user must be in state of learning. Hoffman and Novak (1996) suggest that the consequences of flow in web-based environments relates to increased learning, increased exploratory and participatory behaviours, and more positive subjective experiences, that a critical objective of a commercial website is to facilitate the flow experience. Karahanna et al. (1999) suggest that user's acquire personal experience and their own source of evaluative information in using the information system. Such an experience can have a strong affect on the user in remembering their learning experience on a particular website.

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