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A temporal approach to expectations and desires from knowledge management systems☆

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Abstract

This paper studies the formation of users' expectations and desires from knowledge management systems, and their impacts on satisfaction with these systems. Building on a foundation of expectations confirmation theory and interviews with top managers, three important insights are obtained: (1) expectations and desires differ in their formation and content; (2) the conversion of abstract level desires into concrete product attributes is challenging to top managers; and (3) expectations and desires lie along a time continuum, with expectations playing an important role in shaping perceptions of the knowledge management systems in the short run, and desires being more oriented towards determining satisfaction in the long run. Furthermore, the existence of desires can mitigate the impact of expectations on satisfaction as users look forward to the positive benefits of their desires' future realization.

Keywords: Expectation-confirmation theory; Knowledge management systems; System satisfaction; Interviews

1. Introduction

Knowledge management systems (KMS) are technologies employed by organizations to better retain and utilize organizational knowledge, as well as support knowledge sharing within and between organizations [2,29]. KMS are strongly tied to the organizational practice of knowledge management (KM), which is expected to lead organizations to positive outcomes such as better decision making, improved productivity, and enhanced competitiveness. While much has been studied on the overall practice of KM and the application of KMS (see the special issues of MIS Quarterly, March/June 2005), some aspects of these systems require further study. In particular, there is still mixed evidence with respect to the success of such systems in organizations [15,44]. Managing information systems projects is a complex task. For example, the Chaos report, published by the Standish group, indicates that in 2004 29% of IS projects failed, and a further 53% were 'challenged'.[1] A major cause of these challenges is said to be rooted

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[1] http://www.standishgroup.com.

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in the poor understanding of users and their needs, expectations, and desires from the information systems.

This paper thus focuses on one aspect of KMS that can contribute to studies on KMS success: the formation and realization of expectations and desires related to these systems. The particular path from expectations and desires to KMS success goes through satisfaction. The expectation-confirmation theory (ECT; [28,32]), a prominent theory from the field of marketing, places expectations and their confirmation as an important antecedent of satisfaction. IS researchers have demonstrated the applicability of this theory to IS products and the role of expectations in forming IS satisfaction in various settings (e.g., [3,22,23,26,36]). Satisfaction, in turn, has been widely investigated in the IS field in various contexts (see reviews by Khalifa and Liu [22], Sedera and Tan [31], Zviran and Erlich [46], and a meta-analysis by Mahmood et al. [25]). For example, IS researchers have examined links between satisfaction and IS evaluation [9,11,18], IS success [1,31], behavioral intention to use the IS [16], organizational effectiveness and performance [18,46], decision making and efficiency [3], and continued adoption [4,5,6]. Thus, a better understanding of expectations and desires from KMS, and their impact on satisfaction, is important in realizing a wide set of potential benefits.

The theoretical lens of the ECT suggests that people form expectations and desires concerning a specific product which they then compare to the perceived performance of that product. If expectations and desires are met or exceeded, satisfaction results. Otherwise the consumer is likely to become dissatisfied. Unfortunately, understanding expectations and desires of various stakeholders[2] is a challenging task in the context of IS products [22,27]. The novelty of many IS products, limited product knowledge and experience, and the dynamic nature of technology are but a few of the challenges involved in forming accurate and realistic expectations and desires [23]. These challenges may intensify with the complexity of the IS product, for example if the IS supports different business areas, promises a diverse set of benefits, or is functionally difficult to understand [27]. Such is the case of KMS.

KMS are most commonly defined as a group of technologies intended to support organizational knowledge management activities, with these activities being knowledge generation, codification, transfer, and application [2]. Indeed, an examination of a practitioners' KM website[3] reveals a long list of technologies that are viewed as KMS, including business intelligence tools, decision support tools, collaboration tools, content management and document management tools, enterprise search engines and portals, intellectual property management tools, and records management tools. Moreover, although these technologies have been around for several years, KMS are still new to many stakeholders who have limited experience with KM in general, and even more limited experience with particular technologies.

As a result, we foresee three main challenges in forming and evaluating expectations, desires, and ultimately satisfaction from KMS. First, the limited product knowledge and poor understanding of KMS may reduce the accuracy of the expectations and desires generated, leading to unrealistic perceptions of what the system should deliver to its stakeholders. Second, the obscurity of the technology may make it difficult for users to link expectations and/or desires at the product attributes level (e.g., I expect/would like to have strong business intelligence capabilities) with expectations and/or desires at the organizational outcomes level (e.g., I would like to gain market share). It makes it difficult for users to understand and/or justify how the technology is actually providing the expected and desired benefits. And third, there may be a time discrepancy between the purchase and implementation of the KMS and the confirmation of the expectations and desires from it. For example, it is likely that there will be a delay before the realization of the desire for increased market share can be evaluated reasonably. This time difference is crucial to understanding satisfaction; it may enable KMS users who are aware of the benefit lag to be more tolerant and forward looking in forming their assessments of the KMS.

In this paper, we explore the three challenges highlighted above in greater detail in order to see whether ECT can extend to contexts similar to those of KMS. Specific research questions studied in this paper are: how are expectations and desires formed? How – and if – are they translated from an abstract level to the product attributes level? And how are they

[2] We use the more general "stakeholder" entity as opposed to "user" to recognize the relevance of various groups within the organization (such as unit managers, IT professionals, or executives) to the success of the KMS.

[3] www.kmworld.com.