

## Chapter 54

# Examining the Impact of Web 2.0 Applications on Knowledge Management Performance

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### ABSTRACT

*There has been an increasing interest in the use of Web 2.0 applications to enhance the effectiveness of internal communication and improve knowledge management within the organization. However, extant Web 2.0 research has focused on the implementation, adaption patterns, and benefits, and little has been done to empirically examine the determinants of continuance use of Web 2.0 within the organization and its impact on knowledge performance. The objective of this study is to empirically examine the impact of both hedonic and utilitarian performance on the intention of knowledge workers to continue to use Web 2.0 applications within an organization, and then investigate the influence of the continuance use decision on knowledge management performance. The proposed model is tested using a survey of knowledge workers using Web 2.0 applications in their organizations. The results of the PLS analysis empirically validate the relationship between antecedents, continuance use, and knowledge management performance. Research and managerial implications of our findings are presented.*

### INTRODUCTION

Today's organizations increasingly depend on information technology systems to enhance inter-organization collaboration and knowledge sharing, as knowledge is an important organizational

resource that is crucial for gaining a competitive advantage (Argote & Ingram, 2000). Web 2.0 applications can facilitate interactive information sharing, interoperability, collaboration, user-centered design, and have the potential to facilitate knowledge work in ways that were not possible

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with previous communication tools (McAfee, 2006). Consequently, Web 2.0 applications have been adopted by many organizations in an effort to enhance the effectiveness of internal communication while also improving knowledge management within the organization ("Business and Web 2.0," 2010). An increasing number of organizations are deploying various Web 2.0 tools to support basic knowledge management purposes and processes, including knowledge creation (London, 2013; Jackson, 2010; Kim, 2013); knowledge sharing (Kim, 2013; Michaelides, 2013; Bughin, 2012); and knowledge retention, especially as a way to retain knowledge in the face of workforce retirement (Jackson, 2010; Lamont, 2009). Still other organizations see Web 2.0 as a way to create value on the internet (Wirtz, 2010).

Merely adopting Web 2.0 applications, however, does not guarantee its success. Such tools need to be integrated and used over a period of time in order to achieve positive outcomes within the organization (Andriole, 2010). Despite the increased interest in and the popularity of Web 2.0 applications in managing knowledge in the workplace, few empirical studies have investigated predictors leading to the continuance use of Web 2.0 applications in the workplace, a key indicator of the value within an organization.

The purpose of this paper is to develop and test a research model, based on the existing continuance use, knowledge management, and Web 2.0 literature, which investigates the effects of user experience with Web 2.0 applications on continual usage intention of the technology and the impact of its use on knowledge management performance. A set of hypotheses are proposed regarding the impact of perceived utilitarian and hedonic performance effects on continuance use of the Web 2.0 technology. The results of this study will help organizations better understand what factors determine the adoption and continued use of Web 2.0 applications and the impact of the use of Web 2.0 applications on knowledge management performance. Additionally, the findings

of the study will help us make specific recommendations regarding the most effective ways to facilitate Web 2.0 capabilities to foster knowledge creation, sharing, and retention in organizations.

An increasing number of Web 2.0 product vendors and consultant books and services have appeared on the market, primarily designed to help organizations understand the benefits of Web 2.0 applications in the workplace (Dawson, 2009; McAfee, 2009; Newman & Thomas, 2009; Tuten, 2010). Until recently, research on Web 2.0 applications has been mostly anecdotal or based on a limited number and range of organizations (McAfee, 2006, 2009), providing limited insights into factors leading to Web 2.0 applications use. Given the potential benefits of Web 2.0 applications and that the empirical research regarding the use of Web 2.0 as a knowledge management tool in organizations is in its most nascent state, understanding the Web 2.0 phenomenon in the workplace and the processes underlying its use in organizations will help advance practice and research regarding Web 2.0 applications for organizations. Towards this objective, our study addresses the following research questions:

1. What factors best predict knowledge workers' decisions to continue to use Web 2.0 applications within the organization?
2. Does the use of Web 2.0 applications within the organization impact knowledge management performance?

To answer the two questions, this paper empirically tests a model of continuance use of Web 2.0 applications as predicted by utilitarian hedonic performance, as well as the impact of Web 2.0 use on knowledge management performance. Empirical validation of our Web 2.0 application continuance use model is based on a survey of knowledge workers in organizations.

To summarize, this study has four objectives. First, we attempt to develop an expanded model of IT continuance use that is applicable to Web 2.0

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