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Research report

Understanding information proactiveness and the content management system adoption in pre-implementation stage

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ABSTRACT

The overall technology acceptance literature does not pay sufficient attention to the issue of the mandated use of systems as the traditional acceptance models (e.g. TAM) were originally built, tested, and validated by being applied to technologies that were mainly voluntary in nature, that is, the users had the choice of whether to use or not use the technology. Few have studied end users' proactive motivation to use information and attitude toward newly implemented technologies within organizational contexts, before end-users start using the technology or pre-implementation stage. This research proposes that information proactiveness has influences on the content management systems adoption beliefs such as perceived ease of use and perceived usefulness. The proposed model was empirically tested using the data collected from content management systems end-users. As theorized, information proactiveness was found to be a significant determinant of system users' perceived ease of use but not perceived usefulness in pre-implementation stage. Furthermore, perceived behavioral control was found to be a strong determinant of systems users' attitude. The study findings provide important insights on enhancing system users' adoption behavior in pre-implementation stage.

1. Introduction

From an Information Systems (IS) perspective, acceptance and system use have been the variables of choice for measuring system success (DeLone & McLean, 1992; 2003; Goel, Hart, Junglas, & Ives, 2016; Ouirdi, Ouirdi, Segers, & Pais, 2016). However, within organizations where most system usage is mandatory, intention-to-use or actual usage by and large don't present us with the benefit of seeing a clearer picture of how such use came to be or, more importantly, if such use is truly representative of how end users *really* feel about their use. As such, user satisfaction has been suggested as a "better" measure for success when usage is mandatory (DeLone & McLean, 1992). Interestingly but not surprisingly, the user satisfaction literature has failed to provide acceptable levels of explanatory and predictive power for system usage (Wixom & Todd, 2005).

Attitude theories such the Theory of Reasoned Action (TRA) and its successor the Theory of Planned Behavior (TPB) are powerful in the sense that they provide researchers with the ability to both *predict* and *explain* behaviors (Ajzen, 1991; Fishbein & Ajzen, 1975; Jafarkarimi, Saadatdoost, Sim, & Hee, 2016). Their relative success in explaining and predicting behavior, such as system use, came as a result of their foundational premise that the attitudes people hold toward *behaviors* are better predictors of their behaviors than the attitudes they hold toward the object of the behavior. As new technologies, processes, procedures, and systems continue to infiltrate the world of organizations, research on potential adopters' acceptance of innovations is still receiving attention from professionals as well as academic researchers. Developers of new technologies, senior management, and those who are responsible for managing the changes associated with the implementation of innovations are increasingly realizing that the lack of user acceptance can, and most probably will, lead to losses in resources, not to mention the possible effects on organizations' bottom line.

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Change creates a sense of uncertainty and lost control, and employees' resistance and lack of support in addition to lower levels of acceptance, represent some of the most cited causes for failures associated with organizational change. This resistance represents a major barrier for changing the behaviors of organizational members so as to use the innovation and for the organization to reap its benefits. As such, this research adopts the view that the biggest challenge for management to ensure success in new system implementations, lies in getting users' buy-in and support by creating and maintaining positive attitudes toward the adoption and use of the newly implemented systems.

This research also aims to gain a better understanding of the acceptance process in mandatory adoption environments. The overall technology acceptance literature does not pay sufficient attention to the issue of the mandated use of systems as the traditional acceptance models (TAM) were originally built, tested, and validated by being applied to technologies that were mainly voluntary in nature, that is, the users had the choice of whether to use or not use the technology. In organizations, senior management makes many, if not most, innovation adoption decisions. Those initial adoption decisions are built upon the premise that employees will ultimately use the innovation. What this suggests is that there is a need to modify existing models or even build richer ones that are capable of capturing the complexities of the organizational process that affect users' acceptance in mandatory settings. The mandatoriness concept within the context of this research is reflected in the lack of other choices for users and the fact the decision to use and deploy the new system was made by senior management. In other words, end users have to use the system in order to perform the tasks that relate to content management (e.g Brown, Massey, Montoya-Weiss, & Burkman, 2002). Looking at mandatoriness from this perspective suggests that users of a system in a mandatory environment might base their perceptions of proactiveness and/or mandatoriness on complex set of beliefs, which in turn might have differing influences on relevant variables depending on the phase of the system implementation. This study looks at acceptance as a more complex set of beliefs that go beyond the traditional behavioral intention variable; by introducing attitudinal components and information proactiveness, this research attempts to provide a richer representation of how end users accept new technologies.

What is clear is that IS research still needs to address and identify organizational mechanisms and means through which management can influence and, in a way, shape users' beliefs and attitudes toward adopting new information systems, hence reducing the possibility of failure. This research aims to address some of the gaps existing in the technology acceptance literature. Specifically, this research attempts to test a research model at the pre-implementation stage of a system implementation effort in a mandatory adoption environment. By introducing a relevant variable, such as information proactiveness of content management system users, the ultimate goal of this study is to answer this major research question: ***Will the introduction of a model with information proactiveness for technology acceptance in a mandatory adoption environment, specifically in the pre-implementation phase, allow us to capture and account for the complexities of organizational technology implementations?***

2. Research model and hypotheses

Fig. 1 shows the hypothesized relationships for the original model. Given that nature of the knowledge workers' job is highly information-intensive and information-dependent, Hwang, Kettinger, and Yi (2015) proposed information proactiveness, a person's perceived willingness to actively use information for his job, as an important information management motivation in the organization. Motivation has been investigated as a fundamental determinant of human effectiveness in learning and performance in psychology literature (Colquitt, LePine, & Noe, 2000; Kanfer & Ackerman, 1989; Locke & Latham, 1990; Pintrich, Cross, Kozma, & McKeachie, 1986; Vroom, 1964). Applying these findings to the knowledge worker's information management context, Hwang et al. (2015) proposed that information proactiveness is one of the most important information management motivational factors of knowledge workers in the organization.

Motivation theorists generally agree that motivation is a multidimensional attentional effort (e.g., Ashford & Black, 1996; Kanfer & Ackerman, 1989; Kuhl, 1984; Locke & Latham, 1990; Vroom, 1964). Values are what people want or consider beneficial to their welfare, although the ultimate evidence for what a person values lies in their actions (Locke, 1991). In contrast to needs, which people may or may not have knowledge of, values are in consciousness. One of the generalized value models is expectancy theory (Vroom, 1964), which argues that people act to maximize their expected pleasure or satisfaction and use foresight to choose among courses of action, based on the values they believe each course of action will lead to. Vroom (1964) posited that performance is a function of the multiplicative influences of motivation and ability that are the choices of individual. The expectancy theory is not limited to any particular domain or set of values and proposes that it is important to measure all the values that people believe in the situation in question.

Several studies in the IS field focused on the motivational aspects of information use. For example, Staples and Jarvenpaa (2000) found that perceived information usefulness (motivation) of an individual was strongly associated with the person's use of electronic media and information sharing activities. They suggested that it is important to motivate sharing via individually held attitudes and beliefs and needing to use IT that fits the task. Organizations can also hire people that hold attitudes and beliefs that influence whether or not an individual will share information. Individuals might be reluctant to share information for fear of losing ownership and power, or they may be unwilling to engage in sharing activities that consume time and resources (Roscoe, Grebitus, O'Brian, Johnson, & Kula, 2015; Staples & Jarvenpaa, 2000). Lack of motivation can result in information passivity, secrecy, blockage, withholding, or distortion.

Proactive information use involves how a person is motivated to think about using information to create or enhance products and services, actively seek out information about business conditions to test these ideas, and respond quickly to this information. There is research evidence that suggests the existence of a behavioral predisposition toward information scanning and looking for meaning and new knowledge (Vandenbosch & Huff, 1997). For example, a person who is more proactive in his information usage behavior is motivated to think about, seek out, and respond to new information for his job. Such proactive information behavior would also seem to drive more effective information management practices, as a person has the better understanding of the information required for performing his job. We assume that information proactiveness provides the necessary preconditions of information usage motivation for people to better define new information needs, allowing a better fit of IT to decision-making and problem solving. More effective decision-making tools reinforce proactive information behavior, creating an energized information environment to make decisions accurately and rapidly (Ashford & Black, 1996). Information proactiveness influences the motivation to learn (Colquitt et al., 2000) and motivation to act (Greenberger & Strasser, 1986). Based on the TAM and popular technology acceptance beliefs, such as perceived