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# Uses and gratifications and acceptance of Web-based information services: An integrated model



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#### ABSTRACT

This study combines the technology acceptance model (TAM) and uses and gratifications theory (U&G) to create an integrated model that predicts usage and satisfaction with Web-based information services (WIS). Two pilot studies and three laboratory experiments were conducted to test and develop the concepts, measurements, and the integrated model. The results support the proposed integrated model. Behavioral intention and entertainment motive collectively predicted behavioral usage. Satisfaction was positively associated with the level of usage. The good structure fit with the merge model and data showed that the model explained more than 30% variance of behavioral usage. Although both theories are solid acceptance theories, U&G provides specific information and a more complete understanding of usage, whereas TAM constructs are easily used with Web-based applications. This study gives researchers and practitioners an interdisciplinary perspective for investigating the phenomenon of technology acceptance. In addition, it merges the strengths from the fields of information systems and communications.

#### 1. Introduction

The adoption and use of innovative technology has been a subject of enduring interest to information systems (IS) researchers. The adoption research heavily focuses on how to evoke adoption by improving usability design and by institutional efforts. The technology acceptance model (TAM) (Davis, 1989) is the most widely used adoption theory. The TAM and other adoption models, such as the TAM2 (Venkatesh & Davis, 2000), TAM3 (Venkatesh & Bala, 2008), and the unified theory of acceptance and use of technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003), have been developed along with the advance of information technologies (IT) and have generated useful findings. Recently, Web-based information services (WIS) have been increasingly used by customers; however, their usage are not well explained by current IS adoption theories. This is because IS adoption theories assume that information systems are tools to achieve organizational goals. IS theories are well suited to workplace settings, meaning that less attention has been given to hedonic information systems that are used in a consumer context. However, because many hedonic systems have great business values and are being designed with the needs of consumers in mind, these theories need continued development.

The use and adoption of media/information technologies (IT) is one of the main issues in communications. One adoption theory, uses and gratifications theory (U&G), has recently drawn the attention of IS researchers because it has great potential for examining Internet usage (Stafford, Stafford, & Schkade, 2004). Several IS adoption theories have unique foci on the technology choice phenomenon and mostly focus on job-related usage choices; therefore, they are not immediately useful in the consumer contexts envisioned in our research. For example, diffusion theory, when applied in technological contexts, is predominantly a study of choice related to knowledge acquired from social networks and influence sources in the promotion of new technologies (Rogers, 1983; Rogers, 2002). UTAUT is a comprehensive model of technology choice and use that integrates many adoption theories (Venkatesh et al., 2003), whereas the motivational model (MM) contrasts motivations related to intrinsic personal goals with motivations related to extrinsic goals (Davis, Bagozzi, & Warshaw, 1992). Both models are associated with job advancement issues. In contrast, U&G is used to understand emerging phenomena in consumer contexts such as social media, online information search, and online purchasing (Ancu & Cozma, 2009; Dunne, Lawlor, & Rowley, 2010; Kink & Hess, 2008; Ko, Cho, & Roberts, 2005). Application areas include popular social networking sites, like Facebook,



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Myspace, and instant messaging (Ancu & Cozma, 2009; Park, Kee, & Valenzuela, 2009; Quan-Haase & Young, 2010; Raacke, 2008). This theory has been increasingly used in investigating trends in the adoption of WIS.

WIS have unique characteristics, including machine interactivity, telepresence, hypermedia, and network navigation. WIS/e-services were defined as "the provision of some kinds of services that are substantially differentiated from traditional retailing, such as professional services, entertainment or education" (Wareham, Zheng, & Straub, 2005, p. 3). They are growing rapidly, and range from entertainment services (e.g., video-on-demand service, online games, gambling, social media, and podcasting) to business-toconsumer (B2C) services, such as online banking (Farhoomand & Lovelock, 2001). WIS are information intensive and enabled by technology. They empower users to personalize services, compare and select products, and communicate instantly with others. Subsequently, WIS adoption presents a major challenge for service providers.

Researchers have expressed the need for the rigorous development of a research framework for the theory and practice of WIS usage. Recent adaptations of U&G research on the Internet are applicable, but they are incomplete and have not identified important new Web-specific gratifications. In addition, the TAM's wellvalidated scales remain useful; however, adopted TAM-related models may not be well suited to consumer contexts. Therefore, a merged model has the strengths of both the TAM and U&G. Nevertheless, using a media perspective to investigate WIS use may broaden the view of researchers who typically use an information system perspective to examine Web adoption because WIS currently not only have the characteristics and features of media, but also of information systems.

This study has two objectives: (a) to identify the major motivations of WIS use; and (b) to develop an integrated model that explains and predicts the adoption of WIS. We examine the use motivations that are not captured by TAM-related models; this contributes to practitioners being able to allocate resources to evoke hedonic system acceptance for business values. In addition, we develop the integrated model to extend the boundaries of acceptance theories. Our research question is as follows:

How well does an integrated TAM and U&G model explain the use of Web-based information services?

#### 2. Literature review

First, we review previous studies regarding the TAM and U&G. Thereafter, we explain the rationale for merging the two theories. We adopt an intrinsic and extrinsic motivation perspective to investigate WIS adoption. Therefore, we discuss literature pertaining to motivation studies. Finally, we discuss satisfaction/gratifications and how they enhance the merge model.

#### 2.1. IT acceptance models

The technology acceptance model (TAM) is derived from attitude theory and the theory of reasoned action (TRA) (Fishbein, 1963). It postulates that behavioral intention to use information systems is determined by two belief constructs: perceived usefulness—defined as the degree to which a person believes that using a particular system will enhance their job performance—and perceived ease of use—defined as the degree to which a person believes that a particular system will be easy to use (Davis, 1989). The TAM theorizes that perceived ease of use has direct and indirect effects (mediated by perceived usefulness) on the intention to use because the easier a system is to use, the more useful it can be (see Appendix A for major constructs). The effects of these two belief constructs (extrinsic motivations) have been demonstrated by empirical evidence obtained across user groups and IT applications (e.g., Hsieh & Wang, 2007). In addition, the importance of intrinsic motivations on behavioral intention has been shown by recent studies on Web applications. The key findings of intrinsic motivations (e.g., enjoyment and playfulness) in TAM studies are shown in Table 1.

TAM-related models' (i.e., TAM2, TAM3, and UTAUT) foci of attention reside within organizational contexts. For instance, the TAM2 incorporates the TAM and additional constructs that span the social influence processes (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, and result demonstrability) that relate to IT use in the workplace. The TAM3 builds on the TAM2 and stresses the importance of intervention to system acceptance. Similar to the TAM2, the UTAUT was developed for both voluntary and mandatory contexts in the workplace, where the use of IT is assumed to increase job performance. Under this type of assumption, normative factors play crucial roles; therefore, the UTAUT encompasses social influence processes, cognitive influence processes, and mediating factors (gender, age, voluntariness of use, and experience). All things considered, the uses of the TAM2, TAM3, and the UTAUT are mainly utilitarian (Brown, Dennis, & Venkatesh, 2010; Chismar & Wiley-Patton, 2003; Portela, Aguiar, Santos, Silva, & Rua, 2013; Sang, Lee, & Lee, 2009). Media/IT use is believed to be related to contextual and psychological factors that most TAM studies have overlooked. Thus, we searched for a theory that considers the contextual factors of adoption decisions. U&G theory emerged as our choice because it encompasses both the personal and social aspects of media/ IT usage.

#### 2.2. Uses and gratifications theory

U&G theory is used to investigate why people use media, as well as the gratifications that are derived from media usage and access. In addition, it posits that users' media consumption is purposive and that users actively seek to fulfill their needs from various media (Katz, Blumler, & Gurevitch, 1974). U&G theory is considered an axiomatic theoretical approach because its principles are applicable to almost every type of mediated communication, including traditional media, such as newspapers and interactive media, such as the Internet (see Table 2 for more application areas in consumer contexts). In addition, U&G research demonstrates the historical importance of the expectancy concept, as has been shown in TAM studies. The definitions of the core constructs in U&G are shown in Appendix A.

U&G is used to examine areas such as motivations, gratifications, expectancy value, audience activities, and media consumption (Palmgreen, Wenner, & Rayburn, 1981). Among these areas, identifying the motivations of media use is often the subject of U&G research. For example, U&G researchers have identified a set of common underlying dimensions for Internet usage motivations that reflect the inherent interactivity and user-directed nature of Internet media. These motivations include entertainment, pass time [sic], relaxation, social information (Ferguson & Perse, 2000), escapism, social interaction, information seeking, and preference to use the Web (Kaye, 1998). A U&G study has reported the following motivations for using the Internet: entertainment. pass time [sic], interpersonal utility, information seeking, and convenience (Papacharissi & Rubin, 2000). These motivations were drawn from the interpersonal, media, and new technology motives that support the informative and interactive capabilities of the Internet. The most salient use of the Internet was information seeking, which reflected an instrumental orientation of media usage (Papacharissi & Rubin, 2000). Numerous studies on U&G Download English Version:

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