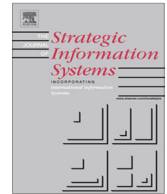




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## Journal of Strategic Information Systems

journal homepage: [www.elsevier.com/locate/jsis](http://www.elsevier.com/locate/jsis)

## Expectable use: An important facet of IT usage

Isabelle Walsh<sup>a,\*</sup>, Mireille Gettler-Summa<sup>b</sup>, Michel Kalika<sup>c,d</sup><sup>a</sup> SKEMA Business School, Pôle Universitaire Léonard De Vinci, 92916 Courbevoie, La Défense cedex, France<sup>b</sup> Paris-Dauphine University, Place du Maréchal Delattre de Tassigny, 75016 Paris, France<sup>c</sup> IAE Lyon School of Management, University Jean Moulin, Research Centre Magellan, France<sup>d</sup> Business Science Institute, Luxembourg

## ARTICLE INFO

## Article history:

Received 28 October 2014

Received in revised form 13 January 2016

Accepted 15 January 2016

Available online xxx

## Keywords:

Expectable use

IT disposition

IT usage

Mixed-design grounded theory

Typological approach

## ABSTRACT

In this article, we add to the growing body of recent theoretical literature on usage, which remains fragmented. We propose a new concept emerging from our work – expectable use – as a dispositional facet of IT usage that may evolve over time, depending on training and context. This facet of usage represents the user's disposition, or inclination, to use any IT (digital devices, software, etc.) pro-actively and in a self-determined fashion; it includes affective, cognitive and behavioral elements that result from both individual and group factors. With a classic grounded theory stance, we use mixed data and techniques, both qualitative and quantitative, to conceptualize, define, and model this new variable; we develop a quantitative index to assess it at a given moment in time. As a result of our work, we also propose that expectable use should significantly explain effective use and utilization.

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## Introduction

In globalized markets, information technology (IT) has now become an intrinsic part of day-to-day social life (Jouët, 2000) and work practices (Orlikowski and Scott, 2008). IT is “everywhere” (Nolan, 2012) and organizations evolve in a competitive landscape that is “networked” (Merali et al., 2012). As a consequence, user profiles and their varying use of IT have evolved significantly during the last decade (Walsh et al., 2010; White and Le Cornu, 2011). “Digital natives” and “digital immigrants” (Prensky, 2001) have started to work side by side in organizations, but situations are not always as one might expect: Some digital natives do not appear conversant or at ease with IT, while some older digital immigrants sometimes reveal themselves as proficient and comfortable with it, their IT usage being proactive and self-determined (Walsh et al., 2010). Prensky's (2001) compelling differentiation between digital-native and digital-immigrant users is now strongly questioned (Holton, 2010; Kennedy et al., 2010; McKenzie, 2007; White and Le Cornu, 2011), including by Prensky (2009) himself. Furthermore, despite costly investments in organizations, some strategic technologies remain much underused, even though they have been carefully tested and are well adapted to help users fulfill certain tasks (Arvidsson et al., 2014; Brown et al., 2004). In other cases, some users approach IT in a proactive fashion: They carry out innovative appropriation strategies, leading to unexpected events, which can affect firms' strategic plans (Kang, 2006).

Usage is a central construct in information systems (IS) research and has received increased scrutiny in the last few years. It has been shown to involve user, system, and task (Burton-Jones and Straub, 2006), and to be a multilevel phenomenon that may be studied at individual, group and/or organizational levels (Burton-Jones and Gallivan, 2007). Usage also involves

\* Corresponding author.

E-mail addresses: [isabelle.walsh@skema.edu](mailto:isabelle.walsh@skema.edu) (I. Walsh), [summa@ceremade.dauphine.fr](mailto:summa@ceremade.dauphine.fr) (M. Gettler-Summa), [michel.kalika@univ-lyon3.fr](mailto:michel.kalika@univ-lyon3.fr) (M. Kalika).

top-down and bottom-up processes (Nan, 2011). More specifically, effective, goal-fulfillment use has recently been investigated (Burton-Jones and Grange, 2013). In the present work, we do not examine the effective, goal-fulfillment use of a specific system; rather, we investigate dispositional IT use – that is, this other broad facet (or dimension) of IT usage linked to users' individual characteristics, their personality (Devaraj et al., 2008; McElroy et al., 2007), their IT values (Leidner and Kayworth, 2006), and their IT culture (Walsh et al., 2010).

The importance of user profiles and individual characteristics for the success of new-IT implementation, and of how users' cognition and affect must be taken into account when investigating IT usage, has long been recognized (Zmud, 1979). However, this issue has not received much interest in the IS literature for many years (Devaraj et al., 2008). Individual characteristics may be investigated through users' general disposition or their specific dispositions (Venkatesh and Windeler, 2012). General disposition is close to users' personality (Allport, 1961, 1962); it is a habitual inclination, a tendency to behave, feel or think in certain ways whatever the situation and/or context. Specific dispositions are dispositions to behave, feel or think in certain ways in relation to specific activities. Some fairly recent works (e.g., Devaraj et al., 2008; McElroy et al., 2007; Venkatesh and Windeler, 2012) have used personality, considered fairly stable over time, to investigate individual characteristics: see for instance McElroy et al. (2007), who used the “Big Five” model. Very few works have concentrated on IT-specific disposition that may, to some extent, evolve over time through training and experience. Venkatesh and Windeler (2012) did choose to investigate IT disposition. They arbitrarily chose to retain only certain IT-specific traits extracted from some of the most-cited papers on IT adoption. Although interesting, their work did not aim to be comprehensive. However, many different variables, which involve affect, cognition and/or behaviors related to any IT and may be understood to be related to IT disposition have been individually studied in the past literature.

The facet of IT usage linked to IT disposition reflects the frame of mind with which a user approaches any new IT artifact. It is a hybrid facet that includes affective components (related to feelings or emotions), cognitive components (related to information processing and understanding processes) and behavioral components; these different components sum up – with varying degrees of significance – into the user's inclination to use any IT (digital devices, software, etc.) proactively and in a self-determined fashion, regardless of the possible inherent strengths (or defects) and affordances of specific software. As such, this facet of usage appears neglected in the IS literature, which appears extremely fragmented on this subject: It has never been either defined or modeled. It is, however, strategically important for organizations to take into account when implementing new IT, as it appears at the source of some of the users' behavioral patterns when they are faced with a specific IT: Some of its components have been shown to have a strong impact on new IT acceptance and adoption (as may be inferred from works such as Devaraj et al., 2008; McElroy et al., 2007; Venkatesh and Windeler, 2012; and Zmud, 1979) and, more specifically, on effective use (as may be inferred from Beaudry and Pinsonneault, 2010, or Pavlou and Fygenson, 2006).

In the present work, which is part of a broader research project about IT acculturation, we investigate more specifically this dispositional facet of IT usage, which we name “expectable use” (the choice of this term being discussed in the article), and which reaches beyond the effective use of specific IT (Burton-Jones and Grange, 2013). We define expectable use as the **user's disposition, or inclination, to use any IT (digital devices, software, etc.) pro-actively and in a self-determined fashion**. While using mixed qualitative and quantitative data in an exploratory grounded-theory (GT: Glaser, 1978; Glaser and Strauss, 1967) stance, we aim to identify the dimensions of a holistic and parsimonious quantitative index to assess a user's expectable use at a given moment in time.

Our contributions are methodological, theoretical, and practical. On the methodological side, GT studies using both qualitative and quantitative data and techniques are still extremely rare in IS research (Walsh, 2014a), especially those that openly adopt a GT approach, and that avoid mislabeling and misrepresentation (Birks et al., 2013). On the theoretical side, we contribute to the IT-usage literature by clarifying and disentangling the different interrelated broad facets of IT usage whose components have been studied in IS literature; we conceptualize, define, and model a facet of IT usage that has been somewhat neglected in the past literature even though its importance has been previously highlighted. We develop new scales to assess the dimensions of this facet of usage. Through a survey with 676 participants and using quantitative techniques, we confirm the proposed measurement model and verify the external validity of the corresponding index with the help of existing literature. Then, we highlight some propositions linking the new construct to some other important constructs of IS research. Finally, on the practical side, our work provides a simple tool to identify possible “ambassadors” (Thomson et al., 2011) to help the diffusion of new IT within organizations.

The present paper is organized as follows. First, we investigate the literature on IT usage. Then, we describe the mixed design of our research and its three phases. Finally, we detail and discuss our results, before concluding.

### Theoretical preview: Investigating the concept of IT usage

In this section, we: (1) address some terminological issues and describe the “core category” (Glaser, 1978; Glaser and Strauss, 1967) that emerged from our work – i.e., a dispositional facet of IT usage; and (2) search for the different facets of IT usage and related types of use investigated in the literature. Even though this literature review was conducted after the core category (expectable use) had emerged from our data, we present it *ex ante* to help readers understand our work (Suddaby, 2006).

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