User Resistance to Health Information Technology

Madison N. Ngafeeson
Northern Michigan University, USA

INTRODUCTION

The vision to use information technology (IT) in healthcare to improve outcomes has been adopted by many a nation, including, the United States. If effectively implemented and efficiently leveraged, these technologies will greatly lower healthcare costs, improve safety concerns, and elevate the quality of healthcare (Blumenthal & Tavenner, 2010). No doubt, several industrialized nations are making significant investments in healthcare costing a substantial portion of their national gross domestic product (OECD, 2011). Recently, these investments have been in the area of health IT. Socio-economic factors such as aging population, increasing need for better healthcare, and rising health care costs have pressured governments to consider controlling costs while improving care (Romanow, Cho, & Straub, 2012).

Nevertheless, health IT implementation and adoption has met with its fair share of challenges. Reports show that physicians, nurses and other healthcare professionals continue to resist the use of technology within healthcare (Laumer et al., 2016; Dinev et al., 2016; Petrakaki et al., 2016). Researchers have proposed models to explain the *how* and *why* of user resistance to IT, and till date, there still is a lack of an overarching paradigm through which to examine this phenomenon. Hirschheim and Newman (1988) noted that resistance is a complex phenomenon which defies simple explanation and analysis; thereby requiring well-accepted theories or paradigms encompassing the full range of variables associated with an individual user's resistance of IT (Martinko, Henry & Zmud, 1996). If not for anything else, governments and the healthcare sector need a return on investment on these systems that have been implemented. Understanding and mitigating user resistance is a clear step forward in improving sector-wide adoption.

This paper surveys extant literature on resistance, synthesizes its theories, and provide a paradigmatic lens for leveraging this knowledge in the practice of healthcare IT implementation. It is hoped that this study will not only increase theory-based understanding of the subject, but that it will provide managerial guidance for change managers and project leaders who live the effects of user resistance in practice. The rest of this paper is structured thus: a methodological as well as contextual background of the paper is set forth, the theories of resistance are then synthesized and analyzed, and the implications of the study are discussed.

BACKGROUND

In order to delimit the scope of this research, to synthesize and to analyze extant literature, we use Cooper's (1988) taxonomy of literature reviews. This model (Cooper, 1988) proposes a taxonomy of reviews based on six categories, namely: the focus, goal, perspective, coverage, organization, and audience of the literature. Given the objective of this study, the literature was reviewed with varying emphases based on Cooper's taxonomy. To achieve this, the review focused on different theories and models of resistance, and highlight the unique perspectives that these theories offer about

DOI: 10.4018/978-1-5225-2255-3.ch331

the phenomenon. First, we discuss a contextual background in the United States healthcare reform that has triggered nation-wide organizational change leading to resistance.

The *Meaningful Use* Reform and Change

On July 13, 2010, the United States administration rolled out a five-year transition plan for the U.S. healthcare industry to move from paper health records system to electronic health records. Over a ten-year period, the U.S. government plans to invest about $70 billion to help the healthcare sector in this transition process (DHHS Press Release, 2010). This governmental mandate has been named, the Meaningful Use policy. It is arguably the greatest organizational change trigger in the U.S. healthcare system to date. Summarily, this reform program set the standards for health IT definitions, guidelines, and implementation.

The introduction of HIT into the healthcare industry has been associated with distinctive changes. Lorenzi et al. (2000) describes possible changes that typify healthcare organizational change namely:

- Operational changes. These affect the way the ongoing operations of the business are carried out, such as the automation of a particular area.
- Strategic changes. These occur in the strategic business direction, e.g., moving from an inpatient to outpatient focus.
- Cultural changes. These affect the basic organizational philosophies by which the business is conducted, e.g. implementing continuous quality improvement system in a clinical environment.
- Political changes. These involve staffing that occur primarily for political reasons of various types, e.g. those that occur at top patronage job levels in government agencies.

THEORIES AND CONCEPTUALIZATIONS OF RESISTANCE TO *IT* IN RESEARCH

H

User resistance to information technology is defined as a user's insistence to not use new IT. It is seen as a user's attempt to minimize his or her outputs while attempting to maximize and increase others' inputs (Joshi, 1991). This resistance, according to Markus, (1983) may range from subtler manifestations of resistance as passivity, misuse, low levels of use, and lack of use to harmful use (Marakas and Hornik, 1996; Martinko et al., 1996; Selander and Henfridsson, 2012). Marakas and Hornik (1996) discuss a form of resistance in which behaviors take "the form of overt cooperation and acceptance of the proposed system combined with covert resistance and likely sabotage of the implementation effort" (p. 208). Lapointe and Rivard (2005), on the other hand, mention the more overt side of resistance with scenarios where users "delivered an ultimatum, demanding that the system be withdrawn" (p. 477). In this study, resistance refers to covert or overt behaviors that oppose change towards the use of- or avoidance of an information system manifested as reactance, distrust, scrutiny or inertia (Ngafeeson, 2013).

The Interaction Theory

Markus's (1983) pioneering research in user resistance to information systems (IS) is arguably the departure point for most IS resistance research. Her seminal work basically responded to the question as to *why* people resist IS. Three types of theories are proposed: first, people are said to resist technology because of internal factors inherent in those who resist or their organizations. Second, resistance stems from external factors emerging from the introduced system. Lastly, resistance may also stem from the interaction of both internal and external factors. Markus termed the latter, the "interaction theory." While the theory of the interaction between the subject