### CIO Perspectives on Organizational Learning within the Context of IT Governance

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#### **ABSTRACT**

Why is it that, despite the large amount of studies on IT governance, many professionals still fail to put these theories into practice? Building on the previous question, we reviewed the literature to examine how organizational learning theories can help in understanding the gap between the 'theory' and 'practice' of IT governance. Thereafter, a focus group discussed this gap within the context of Industry 4.0. The findings indicate important concerns that might hinder learning in organizations, including: lack of shared domain knowledge between business and IT stakeholders, lack of shared understanding and poor diffusion of IT governance practices in the organization. Unless these concerns are successfully resolved, executives will experience difficulties to govern IT successfully within the context of Industry 4.0. We provide recommendations to practitioners with regards to the capabilities which should be present in the organisation to overcome such concerns. These capabilities represent a T-shaped portfolio of skills.

#### **KEYWORDS**

Business IT Alignment, Enterprise governance of IT, Industry 4.0, Internet of Things, IT governance, Organizational Learning

#### INTRODUCTION

Nowadays Information Technology (IT) is crucial in the support, sustainability and growth of many organizations (De Haes et al., 2013). Given this pervasive role of IT in organizations, its governance has become an important subject of study over the past two decades (De Haes et al., 2013). Currently the body of knowledge on IT governance is rich and well developed (Balocco, Ciappini, & Rangone, 2013). Despite these efforts in research, many practitioners fail to apply IT governance theories (Marnewick & Labuschagne, 2011).

In the academic literature, this dichotomy between the best practice ideals and values that are being taught and those actually encountered in everyday practice, is known as the theory-practice gap (Maben, Latter, & Clark, 2006). The theory-practice gap has been recognized as an important concern in the academic literature (Ford et al., 2003). Studies show that organizational learning theories can reduce the gap between theory and practice (Ehrenberg & Häggblom, 2007; Sharif & Masoumi, 2005). Therefore, we explore 'organizational learning' as a diagnostic framework to analyse how IT governance theories are adopted in professional practice.

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The remainder of this paper is structured as follows. We first discuss the key concepts of our research: IT governance and organizational learning. Next, we present our research methodology which consists of a literature review and focus groups. Subsequently we summarize our key findings, followed by a discussion and main conclusions. In the closing, we provide recommendations for further research.

#### **KEY CONCEPTS**

#### **IT Governance**

There is no agreed-upon definition in literature for the concept of IT governance. De Haes and Van Grembergen (2015) use the term "enterprise governance of IT" to explicitly indicate that it should operate at the same level as corporate governance. They define the concept as follows:

Enterprise governance of IT is an integral part of corporate governance and addresses the definition and implementation of processes, structures and relational mechanisms in the organization that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled business investments.

This definition implies that IT governance should address both the current and emerging requirements of the stakeholders and thus be able to continuously adapt (Van Grembergen, 2004). For example, the organization needs to ensure that employees are capable to understand and to take direct responsibility for making sure the organization meets its strategic goals, and that al efforts to do so, including IT, are directed towards that end (R. Peterson, 2004).

#### **Organizational Learning**

*Organizational learning* is a discipline within organizational theory that studies models and theories pertaining to how an organization learns and adapts (Vasenska, 2013). A multitude of organizational learning theories exists (Crossan, Lane, & White, 1999). Table 1 provides an overview of the most frequently cited organizational learning theories in reference to IT governance studies.

The next paragraph outlines our research methodology to examine how these theories are used and applied in practice within the context of IT governance and *Industry 4.0*.

#### **RESEARCH METHODOLOGY**

#### Literature Review

The aim of the literature review is twofold. First, we want to gain in-depth understanding of previous research on organizational learning in the context of IT governance. Hence, we ascertain how this research can enrich our knowledge of successful IT governance implementations. Next, we want to improve our understanding why additional research is important, relevant and interesting.

We reviewed the IT governance literature based on a citation search of organizational learning theories. The term 'alignment' was added to the search string to ensure that all articles that referred to IT governance as an enabler for alignment are included in the results.

An example of the search string is mentioned below:

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