Distributed ‘Knowing in Practice’ Enabled by Knowledge Management Systems

Lakshmi Goel, University of North Florida, Jacksonville, USA

ABSTRACT

Many companies set up operations offshore and complete projects by ‘worksharing’ where responsibilities are split between geographically dispersed offices. This article looks at how knowledge management systems facilitate practices essential for collaborative, distributed work. A qualitative case study is conducted at a large multinational engineering, procurement and construction (EPC) company that has successfully implemented a knowledge management system. The study uses the framework of ‘knowing in practice’ to the context of worksharing. This article contributes to the practice by providing specific suggestions that can be implemented from a social technical perspective to facilitate worksharing. Specifically, suggesting technological factors, and efforts needed by users and managers, in facilitating worksharing. This article contributes to research by applying the lens of ‘knowing in practice’ to the context of worksharing.

KEYWORDS

Distributed Work, EPC, Knowledge Management, Knowledge Management Systems, Knowing in Practice, Offshore Worksharing, Qualitative Case Study, Socio-Technical Systems

INTRODUCTION

In the current business scenario, many companies set up operations offshore and complete projects employing ‘workshare’ practices, where responsibilities are split between geographically dispersed offices in order to increase operational efficiency (Zhang et al., 2016). Industries that often establish an offshore presence include information technology, financial services (including banking, credit card, and accounting), engineering, and the service industry. The method of offshoring has evolved over time. While offshore centers were originally used for non-central, data processing-type work, they are now more a part of strategic operations (Leonardi and Bailey, 2017). Offshore offices play an integral role in winning projects and employ local expertise to work in tandem with employees at the principal offices. This sharing of responsibilities overseas is called worksharing or job-sharing. Besides cost benefits, worksharing helps organizations work around the clock and hence provide service to global clients at any time (Jarvenpaa, 2016).

Research on the phenomena of offshore worksharing is not commensurate with its growing importance to organizations (Jarvenpaa, 2016). Prior literature, business articles and cases inform us about the mixed success of using IT for worksharing (Nuwangi et al., 2014), as well as challenges faced due to cultural, geographical, and temporal boundaries (George, 2006; Lacity and Willcocks, 2017). This paper presents a case study of a multinational engineering, procurement, construction,
and maintenance services company that workshares projects across 51 offices in 25 countries, and theorizes on how it uses a knowledge management system (KMS) successfully in the effort to workshare across offices located in different countries. This is done by drawing on the framework of knowing in practice (Orlikowski, 2002).

Knowing in practice has been used to explain competent distributed organizing in new product development at a geographically dispersed organization. The theory identifies a repertoire of practices needed to overcome the challenges of working across temporal, geographical, political, and cultural boundaries. The focus of this paper is to study how a KMS facilitates the practices of distributed organizing, and hence aids in worksharing. This study fits within a sociotechnical approach to studying systems that recognizes the interaction between people and technology in workplace practices (Mumford, 1985). Data from interviews, company documents, observations, and archival records is used and interpreted in the light of the theoretical framework. In the discussion section, technological features of a KMS and efforts required on behalf of the users and managers of the system to enable the practices are identified. Lastly, limitations and conclusions are discussed.

LITERATURE REVIEW

Offshoring work to outsourced vendors or geographically dispersed offices came into vogue in the 90s. Despite several operational challenges (Bloomberg, 2006), offshoring is now accepted as a mainstay of many organizations. Cultural issues, geographical distance, and temporal boundaries have been identified as major challenges in offshoring (George, 2006; Jarvenpaa, 2016; Lacity and Willcocks, 2017). Somewhat more recent is the practice of worksharing. Companies have looked to employ IT to facilitate worksharing activities, and have met with mixed success (Nuwangi et al., 2014). This paper attempts to theorize on successfully using a KMS to facilitate worksharing.

We start by discussing the context of offshore worksharing, and the challenges in managing knowledge in that context. We next discuss the role of KMS in offshore worksharing and introduce our theoretical framework of “Knowing in Practice”.

Offshore Worksharing

Offshoring has evolved from an exercise in cost reduction to one that enables organizations to become more strategic in leveraging globalization (Manning et al., 2008; Leonardi and Bailey, 2017). One way in which organizations do so is through the practice of worksharing, where competitive advantage can be built by a joint effort between the principal and offshore offices (Ramanthan, 2006). Offshore worksharing enables companies to spread work across multiple global offices, which increases productivity, reduces schedules and costs, and shortens time to market. Offshore worksharing is particularly attractive in the engineering, procurement and construction (EPC) industry due to its ability to leverage varied skills across the globe (Chen and Messner, 2010; Lynn and Salzman 2006; Zerjav and Javernick-Will, 2009; Zhang et al., 2016). New software releases, such as SmartPlant 3D, explicitly provide support and features for worksharing in geographically distributed engineering projects. While there has been research on best practices for managing global virtual teams (e.g. Zerjav and Javernick-Will, 2009), software (E.g. Yalaho and Nahar, 2007), and projects (e.g. Raisinghani et al., 2010; Werr and Stjernberg, 2003) in an offshore workshare environment, there is a gap in literature on how knowledge is managed in the context of offshore worksharing in EPC firms. As Gupta et al. (2009) found, knowledge sharing processes and technology use differ significantly in co-located and globally dispersed teams.
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