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A meta-analysis of brokering knowledge in project management

Vered Holzmann *

Faculty of Management of Technology, Holon Institute of Technology — H.I.T, 52 Golomb St., Holon, 58102, Israel
School of Business Administration, Faculty of Management, Tel Aviv University, Ramat Aviv, Tel-Aviv, 69978, Israel

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Abstract

Brokering knowledge is a fast growing innovative and important research theme in the project management environment. The current paper analyzes and classifies the research on knowledge brokering and knowledge transfer in project management published in the leading journals over the last decade. An array of classifications was implemented on the articles in order to identify patterns and themes of interest. The findings indicate that this field of research is rapidly developing, mainly in the engineering and information technology sectors. It was revealed that many studies are based on qualitative research methods and that research is focused on understanding knowledge transfer between individuals rather than groups. Contemporary issues of study include developing tools for knowledge transferring, understanding the unique characteristics of knowledge transfer in global projects, and discussing the social aspect of brokering knowledge. These subjects are probably expected to gain research attention in the following years.

Keywords: Brokering knowledge; Knowledge transfer; Project management; Research trends; Discipline reviews; Meta-analysis

1. Introduction

The concept of knowledge is probably as ancient as the human race, while the first known theories of knowledge date back to Plato and Aristotle or maybe even to earlier philosophers. Current organizational knowledge communication is the field of study that investigates the dynamic process of transferring knowledge between entities, although the identity of these entities, the environment in which they function, and the nature of their actions may vary in different situations.

Project organizations provide an infrastructure for multi-faceted research on brokering knowledge due to the nature of their distinctive characteristics, as projects are temporary endeavors that incorporated the work of heterogeneous professionals to create unique products or results (PMI, 2008). The characteristics of a project as a temporary effort raise the challenge of sharing knowledge between individuals and groups participating in short-term establishments, which do not have an inherent mechanism of learning, and that are usually focused on immediate deliverables (Lindner and Wald, 2011). Another challenge is derived from the diversity of the project team, which often consists of members from different backgrounds, with various skills, who work together for the duration of the project and then disperse and reassemble in different teams (Ajmal and Koskinen, 2008; Ruuska and Teigland, 2009). An additional challenge is related to the innovative aspects associated with developing new products in projects, which necessitates the sharing of lessons learned and the transfer of tacit knowledge from previous ventures to current projects (Chen, 2005; Goffin et al., 2010), or retain knowledge acquired by experts and specialists to gain a competitive advantage (Daghfous, 2004; Schmickl and Kieser, 2008). Beyond the project level, learning in project organizations is based on cross-project knowledge transferring, where the knowledge acquired in one project is transferred to other projects and it is often used in other contexts (Newell, 2004; Newell et al., 2006; Uffmann et al., 2006). However, the concept of utilizing knowledge from different sources is implemented even in a wider framework, in the case of a

* Corresponding author. Tel.: +972 544 274 568, +972 3 502 6578.
E-mail addresses: veredhz@hit.ac.il, veredhz@post.tau.ac.il.

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partnership established by several project-organizations initiated primarily to achieve better results (Bosch-Sijtsema, 2010; Park et al., 2011).

The subject of management of knowledge was studied by Takeuchi and Nonaka (2004), who defined four modes of knowledge conversion in the form of a matrix. These forms include socialization: sharing and creating tacit knowledge through direct experience; externalization: articulating tacit knowledge through dialogue and reflection; combination: systemizing and applying explicit knowledge and information; and internalization: learning and acquiring new tacit knowledge in practice. This work is a seminal study that promoted the investigation of knowledge transfer in further directions. There is an established agreement that knowledge is an essential asset and a core resource in project management. Therefore, an effective creation and sharing of knowledge is required not only for project success (Benjamins et al., 1998; Davenport et al., 1998), but also for gaining a competitive advantage that enables continuous delivery of successful projects while further developing capabilities and competencies (Hirai et al., 2007; Hsu and Lim, 2007; Kotnour, 1999; Landaeta, 2008; Snider and Nissen, 2003).

Although mentioned and discussed in previous papers (e.g., Andas et al., 1998; Hargadon and Sutton, 2000; Holmberg, 1998), brokering knowledge is relatively a new discipline of research in the arena of project management. However, it has been gaining attention and it is evolving very rapidly in the last decade.

Knowledge brokers act as mediators in the process of knowledge transfer between the various participants in the network. They bridge the gaps and intermediate the facilitation of the knowledge transfer by creating links between individuals or organizational units that possess the knowledge to those who need it (Goffin et al., 2010; Pawlowski and Robey, 2004; Ward et al., 2009). Sometimes knowledge brokers go beyond creating these connections and take an actual part in creating the knowledge itself while adding to it a supplementary value (Hargadon, 1998; Meyer, 2010; Sverrisson, 2001). Knowledge brokering can be accomplished by individual members in the project environment who transfer knowledge between communities (Ajmal and Koskinen, 2008; Ruuska and Teigland, 2009) or by individual experts who are either part of the project team or outside specialists and consultants (Richter and Niewiem, 2009; Sowe et al., 2006). However, knowledge brokering can also be carried out by organizations in the form of a joint partnership (Bosch-Sijtsema, 2010; Park et al., 2011), as consulting firms that transfer their knowledge directly to selected organizations (Hargadon, 2002; Svensson, 2007) or as research oriented organizations that create new knowledge for the benefit of the global community (Arayici et al., 2011; Lomas, 2007; Martin et al., 2008; Ward et al., 2009). Yet another perspective for brokering knowledge is related to the media and channels of transforming knowledge, which is currently dominated by software and automated transferring tools (Contractor et al., 1998; Loew et al., 2007; Szarka et al., 2004).

The aim of the current paper is therefore to provide an overview of the research on brokering knowledge in project management. It intends to map the existing body of knowledge, and to identify and classify major themes of research. This study provides a meta-analysis of the subject matter as researched, analyzed, and discussed in the literature during the last ten years, thus contributes to the research community a platform and basic layout for future studies. The next section describes the methodology and the data used for the current research. The third section presents classifications of the reviewed articles based on several conceptual categories, and the following section explores evolving areas of interest within the field of brokering knowledge in project management. The paper concludes with a summary and a discussion of the research limitations.

2. Research methodology

The research method for the current study was a meta-analysis of the literature. This methodology is an established technique in the project management field of study (Achterkamp and Vos, 2008; Betts and Lansley, 1995; de Bakker et al., 2010). Content analysis was adopted as a major tool for analysis of the published literature on brokering knowledge and project management to highlight trends and patterns. The review was targeted to map and classify previous research conducted during the last ten years.

The first stage focused on searching scholarly peer-reviewed articles in the major academic and practitioner journals. Three major online databases: EBSCO Host, Science Direct, and ProQuest Business, were accessed during July 2011. The search criteria included three parameters: publication date, keywords, and database subject focus. (1) Publication date: the time frame was defined for ten years period, between 2001 and 2011. This time frame was selected because it is narrow enough to include only contemporary interpretations and implementations of brokering knowledge in project management and it is extensive enough to encompass a wide range of themes. (2) Keywords: the keywords for search were brokering knowledge, knowledge broker, or knowledge transfer cross-referenced with project management in the title, abstract or keywords of the published paper. The decision to include the keyword of knowledge transfer was taken due to the low number of articles categorized by the keyword “brokering knowledge”, and since the notion of brokering knowledge is in essence deals with issues of knowledge transferring. (3) Subject focus: in order to gather articles that are related to management and to filter articles that describe projects in other disciplines, the database subjects were set to business, management, decision sciences, economics, engineering, nursing and health profession, and social sciences. However, no selection criterion of specific journals or high ranking journals was applied, thus all journals were considered relevant for this study in order to provide a wide range overview of the work in this field. In total, the search process yielded 82 articles, from 62 different journals.

In the second stage of the study, each one of the articles was downloaded and read. During this initial review process 10 articles were excluded due to one of three reasons: identification as a non-academic/research paper, irrelevance, or inaccessibility to the full paper (see Appendix A for the list of the 10 articles). The remaining 72 articles, from 53 different journals, as presented in Table 1, constitute the dataset of the current study.