Organization of Lessons Learned Knowledge: A Taxonomy and Implementation

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ABSTRACT

With knowledge management systems (KMS) containing large repositories, a major issue is content organization. The ease of finding relevant information depends on the effectiveness of knowledge organization. Ontology, thesauri, and taxonomy are some of the key words that relate to knowledge organization. In this article we propose a schema for organizing knowledge that represents lessons learned from prior experience. Such knowledge from lessons learned has distinct characteristics so that it can be organized in specific ways for ease of discovery, retrieval, and also possible incorporation in formal learning. The proposed taxonomy includes concepts from domain related hierarchy, sources of lessons learned, formal learning, and collaborative inputs (Web 2.0). We describe the proposed taxonomy for organizing the lessons learned knowledge (also termed as knowledge nuggets) and provide details of a specific implementation of this taxonomy in a military organization. Such approaches to knowledge organization have the potential to be useful in many other knowledge management (KM) projects. [Article copies are available for purchase from InfoSci-on-Demand.com]

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INTRODUCTION

Humans learn effectively through stories, analogies, and examples. Davenport and Prusak (1998) argue that knowledge is communicated effectively when it is conveyed with a convincing narrative. Family-run businesses transfer the secrets of business learned through experience to the next generation. Knowledge through experience does not necessarily reside in any business textbook, but the transfer of such knowledge facilitates its profitable use. Nonaka (1991) used the term tacit knowledge for the knowledge that exists in the head but
not on paper. Tacit knowledge is difficult to capture, manage, and share. He also observed that organizations that use tacit knowledge as a strategic weapon are innovators and leaders in their respective business domains. There is no substitute for the substantial value that tacit knowledge can provide. Therefore, it is necessary to capture and codify tacit knowledge to the greatest extent possible.

Knowledge management is noted to be one of the cornerstones of business success. U.S. companies spent an estimated US$73B on knowledge management software in 2007, with the average spending on knowledge management per employee growing to US$1224 (WirelessNews, 2007). According to a report by INPUT, the U.S. government spending on knowledge management solutions is projected to increase 35% over the next 5 years to reach US$1.3 billion by fiscal year 2010 (PRNewswire, 2005).

Despite spending billions of dollars on knowledge management both by industry and government, there is no guarantee that knowledge management projects will attain their objective. Usually it is the successful projects that see the limelight. Chua and Lam (2005) have noted that the amount of published material on failures pales in number when compared to the number of success stories. Yet, Storey and Barnett (2000) quote Charles Lucier, chief knowledge officer at Booz-Allen & Hamilton, as saying that 84% of all knowledge management projects fail to have any real impact. Much research has focused on successful knowledge management initiatives as well as factors that could lead to a successful knowledge management project (Davenport, De Long, & Beers, 1998). On the other hand, many researchers have studied the issue of why knowledge management initiatives fail (e.g., Storey & Barnet, 2000). Some have also presented case studies of knowledge management failures (Chua & Lam, 2005). One of the causes for such failures is that the prospective users of such knowledge cannot easily locate relevant information. Knowledge compiled in a knowledge management system does no good to the organization if it is not easily found by the likely end users.

Every knowledge management initiative must have a schema for knowledge organization. Multiple techniques have been tried for knowledge organization with varying results. Taxonomy, ontology, thesauri, and knowledge maps are some of the terms which are usually associated with knowledge organization. Many researchers have used “taxonomy” and “ontology” interchangeably (Gilchrist, 2003). The need to categorize or organize arises from the need to provide structure to any system. A knowledge repository is an integral part of any knowledge management system (Walsh & Ungson, 1991). If a knowledge repository is revised on a periodic basis, an increasing number of knowledge assets will be added to it, thus increasing the need for an effective knowledge organization scheme.

Sherif (2006) explored the complexities in the nature of the pieces of knowledge and the interrelationships that can exist between these pieces of knowledge in an organization. She notes that the ability of the innovative organization to exploit its knowledge depends on its ability to retrieve it. Knowledge retrieval depends on an effective knowledge organization scheme. In this article we propose a schema for knowledge organization and also illustrate the implementation of the schema with a case study.

Even though we have identified and understood the critical nature of knowledge organization, there is very little research on knowledge organization schemes that specifically focus on lessons learned knowledge (LLK). Such knowledge and its successful organization can be critical for sharing real-world experiences of individuals involved in a task or activity (e.g., those in the military deployed in austere locations) with those who have yet to experience the phenomenon. Furthermore, LLK can be valuable when traditional training and other knowledge transfer options are suboptimal for meeting the knowledge receivers needs. Organization of such lessons learned knowledge is our focus in this article.
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