A TAXONOMY OF KNOWLEDGE MAPS IN BUSINESS APPLICATION

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ABSTRACT

Knowledge Maps (K-Map) can be used to increase the efficiency and benefits of organizational Knowledge Management (KM). K-Map is often mentioned in the literature as an auxiliary concept in KM context. Moreover, existing descriptions and applications of K-Map are generally high-level and somewhat scattered, leading to a rather diverging and thus confusing impression. This research aims at clarifying the confusing concept of K-Map by forming a taxonomy of business applications based on an in-depth review of K-Map literature. Justification and application of the proposed taxonomy are provided. Suggestions and future work are also discussed alone with the analysis.

INTRODUCTION

This work adopted the definition [1] that K-Map is a graphical KM interface to capture explicit knowledge and serve as visual pointers to the holders of implicit knowledge. As concise as it can be, the overall K-Map impression is still a highly abstract and confusing concept. The multiple K-Map aspects each with a single-dimension classification scheme further complicate the K-Map concept. Although K-Map is considered as a format of corporate taxonomies [3], it is desirable to have a taxonomy of the K-Map corporate taxonomies, which is more comprehensive in coverage and sophisticated in structure for multiple populations [13].

The three-layer taxonomy of K-Map is shown in Table 1, in which the top layer of application scope can be for organizational-wide, cross-functional, or individual applications. That means, deploying a specific K-Map is related to the scale of cohesive employees in a KM organization. In other words, the scale of cohesive employees can be individual level, organization-wide level, or in between. Notably, the cross-functional scope means a team of employees from different functional areas involving in one or more work flows. The second layer contains six K-Map categories is as shown in the second column of Table 1, including association, tool, process, hierarchy, label, and index. These six categories are further divided into nine K-Map types: dynamic association, operational association, top-down tool, bottom-up tool, subject process, hierarchy, analysis and comparison label, directory index and arrangement index. To be more specific, these K-Map types are illustrated by the Figures appeared in Literature Review section in column 4, and to be complete, some K-Map types mentioned in listed references are also added to column 5 as shown in Table 1.

As most taxonomies, it is really difficult to sort out a clear-cut layer structure that is pure independent between neighborhood layer items. Therefore, many instances can be found to simultaneous belong to more than two items in the same layer of application scopes, categories or types. A good example in Table 1 is the Competence Map [7] is shown in Dynamic, Hierarchical and Directory types as in the column 5.

Table 1 K-Map Taxonomy

Application Scope	Category	Type	Sample K-Map	Applicable K-Maps in other Listed References
Organizational	Association	Dynamic	Figure 2 [1]	Competence Map [8]
		Operational	Figure 10 [10]	
	Tool	Top-down Approach	Figure 3 [13]	Topology Map [9]
		Bottom up Approach	Figure 11 [6]	
Cross Functional	Process	Subject Process	Figure 5 [7]	Source Map[9]; Process Map [7]
	Hierarchy	Hierarchical	Figure 6 [4]	Static K-Map [1]; Competence Map [8]; Structure Map[2]
	Label	Analysis and Comparison	Figure 8 [12]	Application Map [2]
Individual	Index	Directory	Figure 7 [5]	Competence Map [8]; Development Map [2]; Asset Map[9]
		Arrangement	Figure 9 [11]	

We argue that the proposed K-Map taxonomy exerts four good quality for assisting the understanding of K-Map concept as hierarchical representation, multiple dimension, wide coverage and expandable structure. We feel pretty comfortable with such an initial investigation on K-Map taxonomy. Its quality, however, depends heavily on the secondary data collected from the literature. To inspect more comprehensive and generalized propositions or hypotheses for further work such as "benefits perceived by the K-Map tool to facilitate knowledge search", more efforts are needed. The enhancements can range from more comprehensive data collection methods to a richer variety of data sources. For example, a focus group interview with industrial or consulting experts would be a good supplement to the second data analysis using only the literature.

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