Chapter 12
Communities of Practice Based Business Performance Evaluation

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ABSTRACT

Knowledge Management (KM) is known to enhance an organization's performance and innovation via the knowledge sharing both explicitly and tacitly. Moreover, Communities of Practice (CoPs) has been accepted as an effective way to retrieve and facilitate tacit knowledge particularly. Performance Evaluation of CoPs will significantly impact an organization's strategic focus, knowledge transfer, resource allocation, and management performance. Meanwhile, proper measurement and decision making processes are critical for KM and CoPs success. However, the ultimate performance of CoPs implementation is uneasy to measure correctly. This chapter attempts to analyze how to establish a feasible framework to assess CoPs performance to meet organizational demands. This framework contains four dimensions and sixteen criteria built from review of existing literature and experts' interviews in a large R &D organization. Therefore, this chapter tends to discuss the CoPs and its performance evaluation from a theoretical and practical perspective.

INTRODUCTION

There are plenty of performance evaluations for Knowledge Management (KM) being concretized and contemplated by professionals and intellectuals to figure out key success factors for business today. Extracting knowledge from drowned information with more comprehensive interpretation is increasingly focused on Communities of Practice (CoPs) and hence the concepts such as innova-

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tion, knowledge creation, and governance are continuously sustained in KM domain. Business processes are consistently being looked into and a variety of technologies are seamlessly and directly incorporated into CoPs. How business intelligence can be enhanced at real-time from data collection and people communication into process activities has become critical issue. Thus equipping business processes with right knowledge is widely accepted as the principal challenge.

This chapter establishes a quantitative model to differentiate most of existing CoPs analyses merely from subjective or qualitative viewpoints. It is most likely that several dimensions should be taken into consideration while assessing CoPs performance with multiplicative hierarchy criteria (Kerzner, 1989). Many scholars have adopted AHP (Analytic Hierarchy Process) (Saaty, 1977, 1980) to obtain decision-making alternatives. For example, Hwang & Yoon (1981) discuss the method and application of multi-attribute decision-making. It is easy for participants to complete questionnaires based on comparative importance, which parallels human logic, instead of using actual scores. Recently more scholars have begun to apply Fuzzy AHP (Fuzzy Analytic Hierarchy Process) (Buckley, 1985) to resolve such fuzzy Linguistic Scale problems to facilitate expressions by study participants, such as Chen & Mon (1994) in the selection of weapons systems. Therefore, this chapter first conducts AHP to obtain the hierarchical weights for each dimension and criteria needed to evaluate CoPs performance. In addition, in order to evaluate performance, the chapter assumes CoPs as the group involvement process and can be compared in terms of ranking system. The techniques such as TOPSIS (Technique for Order Preference by Similarity to an Ideal Solution) and VIKOR (VlseKriterijumska Optimizacija I Kompromisno Resenje) can be seen as the proper approaches to measure the CoPs performance ranking. These two techniques are based on an aggregating function representing "closeness to the ideal point", which can highlight and compare the innovative idea, academic analysis, and practical application created by this research. In addition, its non-linear nature provides better results than do mathematical averages, especially when extreme bias or widely differing viewpoints exist among the decision-makers. In other words, TOPSIS is chosen to measure CoPs based performance is because it can calculate the shortest distance from the positive ideal solution (PIS) and the farthest from the negative-ideal solution (NIS) for solving a multiple-criteria decision-making problem. The basic concept of VIKOR lies in first defining the positive and negative ideal solutions. The positive ideal solution is the alternative with the highest value while the negative ideal solution is the one with the least value. These two approaches are principally adopted to implement the CoPs based business performance evaluation.

This chapter attempts to analyze group decision-making under well-defined definitions, hierarchical structure, and quantitative calculation to get a comprehensive CoPs evaluation model. The model is considering multiple and trade-off options among multi-criteria alternatives to find suitable CoPs solution. The proposed questionnaire is composed of theoretical underpinning and practical experience from experts to establish sixteen criteria and four performance alternatives on the basis of four dimensions (Chu et al., 2007). Before distributing the questionnaires, a pre-run has been conducted with CoPs experts and then modified the inadequate parts to ensure all the questions could clearly express and measure the criteria. A framework with four performance alternatives and sixteen criteria is built on the basis of four dimensions - Leadership Locus, Incentive Mechanism, Member Interaction, and Complementary Assets - so as to establish multi-level and multi-criteria evaluation. When CoPs takes different approaches, their implementation orientations and major impacts differ. In the context of strategic goals and transformation, using different CoPs will influence resource allocation and overall achievement of success.