

Developing a model for knowledge management practices in SMEs of software development industry

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For centuries, scientists, philosophers and intelligent laymen have been concerned about creating, acquiring, and communicating knowledge and improving the re-utilization of knowledge. However, it is only in the last few years or so that a distinct field called “knowledge management” (KM) has emerged. KM is based on the premise that human beings are unable to draw on the full potential of their brains. Thus, organizations are generally not able to fully utilize the knowledge that they possess. Through KM, organizations seek to acquire or create potentially useful knowledge, and to make it available to those who can use it at a time and place that is appropriate for them to achieve maximum effective usage in order to positively influence organizational performance. It is generally believed that if an organization can increase its effective knowledge utilization by only a small percentage, great benefits will result. The main focus of KM research to date has been on processes and structures within large organizations in order to improve their performance and competitive standing, assuming that those organizations have the necessary resources at hand. It is found from the literature, the studies for implementing KM in small and medium enterprises (SMEs) have not been systematically investigated.

Since, Software development is knowledge intensive, it requires knowledge that embeds in software products and knowledge that describe development process as well as organizational processes. Hence, managing knowledge is a critical capability for SMEs, because it helps them leverage their most critical resource in Software development. The research work presents a conceptual model combining insights across software industry in SMEs as a means of implementing KM concepts evaluating the effects on people and organization, technology, workflows and processes for the effective decision making in the roadmap for the success of the organization. The population was divided in to subcategories, small, medium and large scale software companies and then random samples were taken from each category. Primary data was collected from the samples by administering a structured questionnaire and interviews. The research discovered that SMEs do not manage knowledge the same way as larger organizations. Viewing SME knowledge management practices as scaled down versions of the practices found in larger organizations is incorrect. SMEs have understandable resource constraints, and hence have to be creative in working around these limitations in order to manage knowledge. The proposed model integrates concepts such as Knowledge infrastructure, Knowledge combination, Knowledge evaluation, Knowledge filtering, Knowledge Repository, Knowledge Sharing, Knowledge Application and Knowledge Performance in accordance with the SME in software industry. The results of this study would help SMEs to better understand the KM discipline, to facilitate its adoption and to prioritize its practices.

Keywords: Knowledge management, Small and medium-sized enterprises, Software development industry