



# A Framework for Knowledge Management Using ICT in Higher Education

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## Abstract

Knowledge constitutes a key organizational resource and the realization that it should be managed effectively is becoming a key concern for managers of higher education institutions (HEI). There is need to access, share and exchange these knowledge to ensure that the goals of higher education are achieved. To study and develop a framework for KM using ICT in higher education, we describe in this work a conceptual approach that explore new KM framework methods for capture, maintenance and reuse of knowledge resources in HEI.

## Background & Motivation

- Over the past decades, knowledge-based management practices have advanced to the point that they are driving the development and advancement in mass-market tools for knowledge collaborations, sharing and exchanges through use of ICT.
- However, the use of these ICT tools in KM have brought with it new challenges on methods, processes and technologies on how to manage knowledge resources in HEI effectively.
- This work is part of an ongoing study to explore new ICT-based KM framework methods for capture, maintenance and reuse of knowledge resources in HEI.
- The study takes existing research on KM which is currently limited to abstract concepts, ideas, frameworks, models, and anecdotes by adding significantly through empirical analysis to the existing theories and practical application of KM research in higher education.

## The Methodology of KM Framework Design

- Our proposed KM framework design approach builds on the theoretical foundation of Chen and Burstein (2006) dynamic model of KM for higher learning and Rubenstein-Montano et al. (2001) hybrid approach to KM to develop an appropriate framework for KM using ICT in higher education.
- The framework methodology integrates HEI activities, people/culture, policy, ICT and KM methodologies and processes in the KM framework design process.
- The approach is based on KM process analysis, analysis of available knowledge, contextual analysis of organizational structure and memory, and KM system analysis and integration.

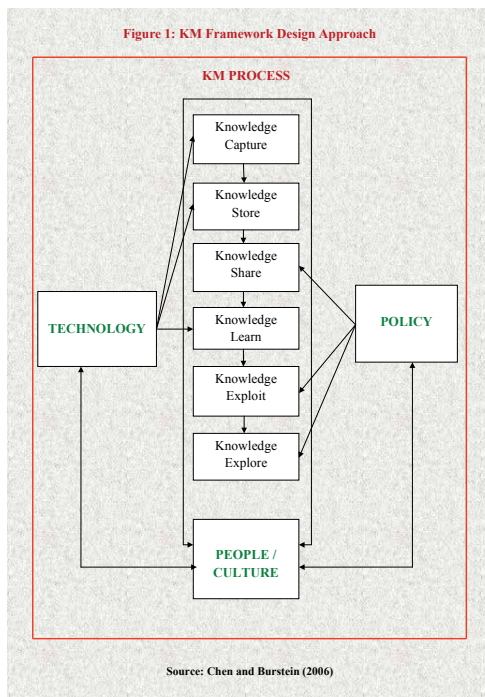


FIGURE 1: Methodology for studying, analyzing and evaluating KM Framework

## Conceptual Framework

- The framework delineates the relationships and interdependencies between KM factors and KM processes and gives a first understanding of the approach that will be empirically analyzed, tested and refined to come out with an appropriate ICT-based KM framework for higher education.
- It provides the metrics, guiding principles, and directions for a sound KM implementation framework.
- It seeks to increase effectiveness and efficiency in KM in HEI and enhances institutional knowledge learning and sharing for discovery and innovation of new knowledge.

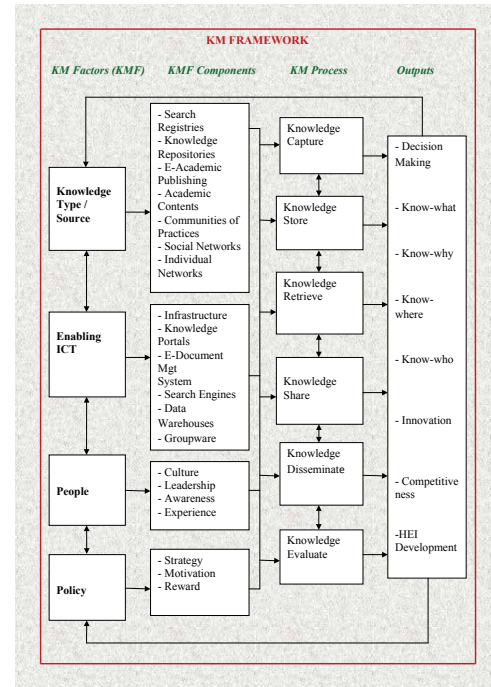


FIGURE 2: Conceptual Framework for KM in Higher Education

## Related Work & Projects

- Development of a strategic knowledge management model for Thai Universities - (Sarawanawong, 2009)
- A framework for knowledge management system implementation in collaborative environment for higher learning institution - (Abdullah et al., 2005)
- A dynamic model of knowledge management for higher education development - (Chen and Burstein, 2006)

## Conclusion and Further Directions

In line with Wong and Aspinwall (2004) guidelines on effective design and implementation of KM, our proposed framework fulfills the stipulated requirements:

- It has clear structure and provides directions on how to conduct and implement KM.
- It delineates the knowledge resources or types of knowledge to be managed as different types of knowledge require different management strategies.
- It highlights the necessary KM processes or activities which are needed to manipulate the knowledge.
- It includes influences or factors that will affect the performance and bearing of KM.
- It provides a balanced view between the roles of ICT, policy and human beings in KM.

**Future Work:** Empirical analysis and testing of the framework using case studies in HEI settings to evaluate the effectiveness and efficiency in implementing KM.

## References

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