

Implementing a Knowledge Management System in an Academic Institution: Issues and Challenges

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ABSTRACT

Today as we are heading to competitive environment, the nature and significance of knowledge is changing rapidly. This environment has made the role of knowledge greater and more crucial than ever before. The changing importance of knowledge had encouraged companies and organizations to invest time and money for implementing knowledge management system. Academic institutions are no exception. This paper describes the transition of applying knowledge management concept in an academic institution that is UNIMAS. Issues covered include developing knowledge-sharing culture, challenges faced by the group in implementing the system and solutions, and lessons learned and tips that could be shared to other related organizations/institutions. Among all, it describe major issues regarding people, hardware, software, technology and organizational politic.

1.0 INTRODUCTION

Today as we are heading to competitive environment, the nature and significance of knowledge is changing rapidly. This environment has made the role of knowledge greater and more crucial than ever before. The changing importance of knowledge had encouraged companies willing to invest time and money for knowledge management (KM) system development. This is where a central repository is built so that employee within the company can access the knowledge. This paper will explain about KM and its successful stories as well as its pitfalls. KM effort was tremendously famous for business and government organizations. Less attention has been given to ensure KM concept and technology is applied successfully in an academic environment.

Many companies do not “know what they know”, and this always leads to duplication of effort throughout an organization. Before going further to KM, what actually knowledge is? According to Webster’s Dictionary, knowledge is the fact or condition of knowing something with familiarity gained through experience or association. This may be found in an individual brain or stored in organisational processes, products, facilities, systems and documents. A KM system will help an organization to gain insight and understanding from its own experience. Benz (2001) argued that KM system is not a system or a product, but a process. His definition for KM system is “infrastructures that support knowledge management processes by capturing, classifying, organising and distribution information” (Benz, 2001). For example, Hewlett Packard has developed a KM system known as “Knowledge Links”, where it is actually an

infrastructure that support knowledge management processes and accessible by any of the employee within the company to codify, identify and store important company knowledge.

2.0 WHY DO WE NEED KM SYSTEM?

Think of situation like when you need to find people who used to help or direct you in doing your tasks, but unfortunately that particular person is not there. He might had left the company for certain reasons, therefore, if his valuable knowledge in particular area has not been captured or stored in appropriate way, the company will lost a valuable thing which money cannot buy. Even, if he stays, there might be other people within the company who need the knowledge of his skills and past projects to assist in doing their work. This is one of the reasons that the knowledge of the employees need to be organised in a way that it can be located, accessed, and maintained by the employees or business partners within the company. Developing KM system, which one way to facilitate knowledge transfer, can do this.

3.0 REQUIREMENTS FOR KM SYSTEM SUCCESSFUL

In order to create a great and successful KM system, there are requirements or special needs that should be in the methodology. These requirements are multi-role users of KM system, emphasis on sharing knowledge, and many more:

1. Multi-role users of KM system means that there are many groups of users will share the knowledge therefore target audience or user needs to be defined in the first place.
2. If the target users are the potential business partners, so think of ways on how to capture these groups by meeting their needs and expectation of knowledge as different groups have different priorities, objectives and background. Strategies need to be applied to capture these users at the same time through the same KM system.
3. Another important thing is design audience or user communication. Make interaction with users on the system through various ways such as online inquiries, feedback from users to get potential users’ comments and ideas on how to improve the value of knowledge in KM system’s content and style. According to Myers and Swanborg (1998), keep on doing the review and revision is one way of quality control. These

aspects are important because if the knowledge the users wanted could not be found or accessed, the knowledge will give no value at all or useless.

4. KM system is developed to aid and encourage people to knowledge sharing. Therefore, this aspect on knowledge sharing should be highlighted before developing any KM system. Mullich (2001) claim that in order to capture knowledge sharing, it requires people to give or contribute information and knowledge to the system, ranging from “executive suites to the cubicles of users”. Relate to this matter, Ralph Rodriguez, vice president and chief information officer of C-bridge Internet Solutions Inc., believes that KM system can succeed only if it is founded on a range of perspectives that reflect the whole organization.

From the perspective of system development, there are also few questions that need to be considered before setting up any KM system. These questions can be:

1. Who the audience or target user is;
2. Who needs to be involved internally; and
3. What their roles are.

Chait (1999) added some key questions need to be considered as well, which are:

1. What content is being used or unused;
2. How to promote the content to additional potential users;
3. Which knowledge elements to start with;
4. Which one has the highest priorities; and
5. Many more.

After having these points in mind, then the development process can be pursued. These key questions however need to be reviewed from time to time during project development because some of the answer can be change for improvement.

4.0 APPLYING KM IN AN ACADEMIC ENVIRONMENT

Academic environment is an environment that is different from business organization where in an academic environment individual knowledge is much more considered as personal assets to each lecturer or researcher. Most of the activities in an academic environment are focus on teaching, research and consultation. Other activities are just to support these activities. Normally, knowledge is very much kept to individual lecturer or researchers. Some of them just do not see the benefits of sharing their knowledge with others. Suggested areas by Kidwell et al. (2000) are Research, Curriculum Development, Administrative Services, Teaching, and Staff Development.

To facilitate knowledge sharing and distributing, a project has been initiated to apply KM theory and concept in academic environment. As a pilot project Faculty of Computer Science has been chosen to implement the project. All lecturers are involved in testing the newly build system. The system is called FoCuSIT Intranet was launched by its Dean. **Figure 1** shows the FoCuSIT Intranet v2 main page. The page can be accessed through <http://www.omega.fit.unimas.my/focusit>.



Figure 1: FoCuSIT Intranet v2 Main Page

5.0 KM PROJECT IMPLEMENTATION

This project has undergone five phases, which are:

1. Phase I: Initiation
The first phase was to identify the metrics to monitor knowledge management process. The scope of this research was to look at the knowledge required by the faculty, that are in the five areas identified by Kidwell et al. (2000).
2. Phase II: Requirement Analysis
In the second phase, we obtained user opinions using questionnaires distributed to the faculty academic staff members (target users of the Intranet). The questionnaires enabled us to evaluate and analyse the needs of the users and assist us in redesigning the Intranet website.
3. Phase III: Design
This phase was to design the website. The website was designed based on users' feedback. The website is accessible to all faculty members.
4. Phase IV: Implementation
The Intranet was completed using Javascript, Php, and Html. It contained components such as Programs and Courses Research. The system is called FoCuSIT Intranet v1 and is accessible through <http://intranet.fit.unimas.my>.
5. Phase V: Post-implementation (Intervention of Intranet)
Analysis of the visit for the web page, determine whether KM theory and concept can be applied successfully in academic setting.

6.0 ISSUES AND CHALLENGES

The project has achieved a great success in enabling the faculty in knowledge sharing and distributing. It has been put as a major platform for faculty's knowledge repository. Most of the information required not only by lecturers and researchers but also information needed by support staff and general office workers. However, research group is facing problem in getting people to utilize the system. At the beginning, despite efforts such as weekly emails about information available, invitation to use the Intranet, the uptake of the Intranet was extremely slow. It was recorded that less than 50 visits for each month. Some of the problems identified are:

1. No clear direction from top management for people to use the system. Without clear direction from top management people will try to avoid involving in something new and unsure.
2. People are not clear about the benefit they will get from sharing knowledge. This project does not include a briefing session to each of the lecturers, researchers and other staff as a part of the project. Therefore people are still very confused.
3. Difficult in adapting into a new situation, where mostly lecturer is still practising the old culture. One key means for changing the culture was embedding knowledge orientation into the organization's performance evaluation process,

in his case is the yearly evaluation process (SKT); lecturers, researchers and other staff are going to be evaluated in part on their contributions to and use of knowledge.

4. Lack in promoting the newly build system. The group has not done enough promotion about the system. Lecturers have been asked to use the system but no further elaboration about the system and how it can benefits its users.

In addition to the problems above, top management was requested to migrate the current platform to Hyperwave. The move to Hyperwave was to ensure that all items were efficiently managed. The new system is called FoCuSIT Intranet v2.

7.0 PROPOSED SOLUTIONS

Given that the Intranet v1 was completed, and no one is using it, it would defeat the purpose of having the Intranet. In order to encourage staff to use the Intranet, an attempt to get support from academic staff was initiated by employing focus groups and participatory approach. Five to six lecturers will be led by a facilitator (a member of the Research Team). The group will be asked to identify problems/weaknesses in the five main areas as mentioned by Kidwell et al. (2000). The group will then be asked on ways to the problem/weakness (it was believed that Intranet will be one solution that will be suggested). While the development of Intranet v2 was in progress, the first focus group meeting was done successfully where some of the lecturers gave feedback and starts to aware the benefits they will get from the system. It is hope to have a second focus group session and show the group, how Intranet can meet some or all of their needs.

Through this method hope to increase the awareness and acceptance of the Intranet v2 and in turn determine whether Knowledge Management Processes can be employed in an academic setting to assist users' needs.

8.0 CONCLUSION

As a conclusion, this project has given researchers a great amount of knowledge and experience in KM. Although the project has faced few problems during its implementation, it is hope that the project will benefit the faculty as much as KM was promises. The newly build Intranet v2 is on a powerful platform, Hyperwave that has a very good way of managing documents. The combination of all benefits from both sides is really going to benefit not only the faculty but also Unimas. It is hope that Unimas will consider to implement this project throughout the organization.

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