Opportunities and Challenges of Knowledge Management in Educational Institutions: Use of Social Networks

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Abstract: Success of an organization is increasingly determined by its ability to improve its performance through learning. Those organizations that do not know and passively wait until the consequences of change begin to cause problems do not have a chance to survive. At present, knowledge and work with it are at the forefront of the interest of experts in many areas. These include areas such as national and transnational policy, management at organizational level, computer science at the level of knowledge management as well as academic area at all levels. In our work, we try to focus on the challenges and opportunities that application of modern tools of knowledge management in educational institutions may bring.

Keywords: knowledge management, social networks, educational institution.

1 Introduction

The world has begun to rely more on knowledge after finding out that the economic functioning of the society has changed. First, there was a focus on how to make the most of the minimum of resources. Later, the focus was on the production of smart products. At present, modern organizations are focusing on cost-effective solutions and relationships with clients for their successful marketing. Emphasis on knowledge management is a natural consequence of economic, industrial, and cultural development. Many former developing countries can compete with developed countries in technology, software development, advanced product design, and more. Competitiveness in offering the best products and services based on relevant knowledge has become truly international. Companies that have applied knowledge management for some time can boast tangible and intangible benefits. The benefits of applying knowledge management are also visible in their leading position within various sectors of the economy.

At present, we are all bombarded by a huge amount of information of every kind on every side. This trend gives scope for the use of knowledge management tools in virtually all areas of human effort. Educational institutions, whose mission is to collect and manage information and share knowledge with students and the public, should be the leaders in the use of knowledge systems.

Educational institutions are aware of the need to manage their growing academic and intellectual resources by more effective methods and practices, especially those that are produced electronically and can easily be lost or devalued [1]. There is an increasing need to retain knowledge such as procedural practices, individual and collective presentations, online materials, or ongoing research, whether in the form of tacit or as explicit knowledge. Knowledge management can help achieve these institutions' resource conservation goals, understanding their knowledge, sharing knowledge within the academic community, and understanding processes to streamline administrative and professional activities.

Preparing successful graduates for the needs of a knowledge-based economy requires a learning environment that promotes creativity and commitment to lifelong learning. Educational institutions are trying to educate graduates capable of competing in the knowledge society. This effort forces these institutions to function in a state of continuous progress, analysis and response to external opportunities and threats arising from knowledge creation and sharing [2].

2 KM Strategies in Educational Institutions

McCarty's [1] research focused on the application of the knowledge management principles used in the corporate economy as well as in educational institutions. As for the issue of growing academic and intellectual resources in the field of education, research revealed a mix of ways to solve this problem. One of them was application of a knowledge system aimed at protecting, organizing and indexing formal knowledge, which can be kept in the form of documents and databases. Another solution was to create a knowledge-based community. This strategy involved the use of groupware for formal and informal communication, which became the source of lessons learned or expert database. The results indicate that not all intellectual resources have the same need for retention. It is, therefore, necessary to decide what is necessary to preserve. These decisions were left to individual academic departments.

Another area of research was finding out how a successful process of building knowledge increases the activity of academic staff and students. The outcomes show that those institutions which use knowledge management are doing better although there are still problems with the formation of knowledge-making communities. The concept of knowledge management has not led to consistency in defining this term or consistency in how it is applied in different departments. The communication networks of knowledge workers and their exposure to various interest communities have led to broad sharing of experience and professional skills.

The third area of research was the role of the technical system in sharing knowledge. It was found that the possibilities of storage and retention of knowledge generated by technologies are indispensable for the interconnection of essential competencies and the maintenance of communities. Knowledge systems have linked knowledge workers and supported existing and emerging communities. The technical infrastructure has been used to acquire tacit knowledge and transform it into explicit knowledge. These were expert databases, repositories, and online blogs as collaborative spaces. The key benefit of the knowledge system was better access to information in one place [1].

The findings of the Knowledge Management application research show that concepts of learning, sharing and knowledge transfer are the cornerstones of educational institutions, and processes and technologies such as knowledge systems can be powerful means of linking communities within the institution.

The results of the research on the knowledge management implementation in educational institutions led to provision of several priorities for a particular organization. First of all, it is creating a favorable environment for knowledge acquisition and creation (so-called Ba) [3]. It is about gathering information about the latest research results in a particular field of study, the processes and practices used in other institutions, and the possibilities of working with other institutions in the field. In order to create a favorable environment for knowledge creation, it is necessary to organize regular meetings, seminars, working groups or conferences.

It is necessary to create conditions for both physical and online interaction between members of the academic staff and students to achieve constant sharing of the best practices. The purpose of creating and sharing of knowledge is its use and application. It will, of course, vary depending on whether it is used by students, administrators or members of the teaching staff.

Two universities with an identical number of teachers, study programs, spending, and number of students can vary considerably based on ratings by official institutions as well as the public. The difference often lies in the intangible added value created by the effective knowledge management. It is applied through web based portals that are used for teamwork, sharing the best practice information, as well as anywhere and anytime available learning platform.

N. Aharony [4] focused his research on the use of a wiki as a part of knowledge management training to promote discussion in the process of creating and sharing knowledge. A wiki was used as a means of presenting information and projects, as a means of discussion between the teacher and the student, as well as a knowledge repository. The findings showed that the discussion section of the wiki included collaborative, content-related comments as well as social comments. The major part, however, focused on the content related comments and reflected the use of deep knowledge. Yet, this way of learning requires the instructor and students to participate in, encourage and maintain discussion.

The knowledge portal Info-Ca-Sh created by a team of staff at the Government College of Engineering in Salem, India [5], is also an example of a platform for sharing knowledge among teachers and students. This portal is aimed at improving the sharing and codification of knowledge and analysis of social networks of educational institutions.

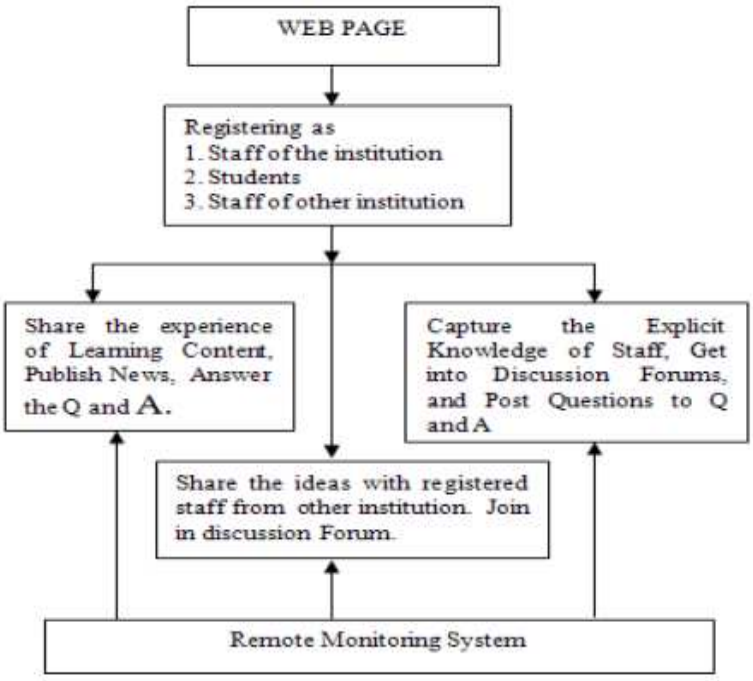

Fig. 1 *Entity Relationship Diagram of Info-Ca-sh [5]*

Figure 1 shows the entity relationship of the Info-Ca-Sh knowledge portal. The portal has a data repository of academic staff and students of the institution. It also involves sharing and capturing tacit knowledge through blogging. Of course, the portal provides space for discussion, too. It serves as a base for a social network consisting of faculty and students, creating nodes representing some type of interdependency based on similar interests, beliefs, knowledge or prestige.

3 Social Networks as a Learning Tool

According to Xiang Liu [6] from the Marymount University in the US, 65% of university students prefer the Internet as a source of knowledge and 20% turn to teachers or classmates. Only the remaining 15% use a library for this purpose. The author considers Web 2.0 tools, along with social networking tools, to be a great opportunity and a way to bring students to a "knowledge country".

Anam Ali's [7] study done at a medical school in the UK focused on usage of Facebook as a learning tool. Students used their profiles, groups, and pages to post questions and discuss work. The results showed evidence of collaborative learning occurring on Facebook through peer teaching and sharing of learning experience. Facebook also assisted students in creating and maintaining connections with peer students, keeping them updated on social events and societies. In addition, it helped them in transmission and sharing of academic resources in various media forms, such as documents, videos, Power Point presentations, and websites. The study suggests that Facebook can be used as a complementary educational platform that allows each learner to create a personalized online learning space.

A recent survey in Slovakia showed that up to 93% of students and 75% of intellectuals use social networks and the most preferred platform is Facebook, which is used by 49% of the Slovak population over 14 years of age [8]

All of the above mentioned examples support the precondition that current students are digital natives preferring online resources and platforms as their primary source of information and knowledge sharing. That can be designated as the most important aspect of knowledge management, since the majority of KM initiatives depend upon it.

Current trends in education reflect an increase in popularity of online learning all around the globe. This mode of study has a great potential of contributing to worldwide mobility, lifelong learning and equal chances in international education [9]. It provides several advantages to students compared to the traditional classroom mode. It is more accessible since students are less bound by time and location. It provides a higher degree of flexibility as students are not limited by fixed schedules and can continue in their personal activities and obligations. Finally, distance learning is more affordable since it is often less expensive than the classroom mode. This way, it brings a learning opportunity to those who otherwise could not afford studying for a degree.

Increasing use of both distance learning and social networking platforms leads to a logical conclusion of merging the two in order to improve online teaching and learning. Social networks provide space for sharing information among students, as they are personal or learning-centered and help create intimacy among online students, as they have the ability to connect and build community in a socially and educationally constructed network.

On the contrary, course management systems like Moodle or Blackboard are narrowly focused and miss the personal aspect as well as the capacity provided by social networks. The use of traditional online learning modules is rather a question and answer type of mode than interaction. Social networks are user-centered rather than class-centered and increase student engagement. They can actively encourage online community building, extending learning beyond the boundaries of the classroom [10]. Figure 2 shows comparison of a traditional course management system (CMS) and a typical social networking site (SNS).

Tools	SNS	Traditional CMS
Forum	X	X
Blog	X	X
Media Sharing	X	
Messaging	X	X
Wiki		
RSS	X	
Chat	X	X
Calendar	X	X
Tagging	X	
Own Brand & Visual Design	X	
Realtime Activity Stream	X	
Groups	X	
Friends	X	
Profile Pages	X	
File sharing		X

Fig. 2 *Comparison of a social network site and a course management system [10]*

When used correctly, social networks can get students to practice lower level thinking at home and prepare them for higher level thinking in the classroom [11]. The opportunities provided by the use of social networks as an online learning platform can be defined as follows:

Increasing student collaboration – social media networks serve as an easy contact link with other students to discuss school projects and assignments. They can easily ask peers as well as instructors for help, and the whole class can have access to various feedback.

- Encouraging participation – shy students who do not participate in class can see the social network as a convenient platform for expressing their ideas. Current students are raised by the internet and social networks, which are a natural way for them to interact. It helps them build self-confidence and encourages them to participate.
- Easy resource sharing – websites, videos, tutorials are easily shared by a click of a button.
- Preparing students for future employment – students can easily make contact with employers and other job seekers. With LinkedIn, students can establish a professional web presence or post a resume [12].

Of course, there are also several threats coming out of the social networks used in education:

- Distracting from classroom participation – students can start using the social networks for their personal purposes and not pay attention to class content.
- Posting inapropriate content – bad language or images can be harmful to the institution's reputation as well as to students.
- Cyberbullying – malicious behavior, harassing students by hurtful messages.
- Social networks divert from face-to-face interaction – for many individuals it is easier to interact online; students lose real-life social skills [12].

4 Conclusion

The way in which a knowledge management strategy is implemented in a sustainable manner in an educational organization is not simple, and potential solutions need a broad range of strategies and strong and visionary leadership in institutionalization of such a practice. One of the efficient strategies seems to be the use of social networks in education. There are some threats to be considered that require continuous review of practice. Social network guidelines and policies are useful tools in supporting their use in schools and colleges, but these should not hinder creativity. Social networks provide real opportunities for innovative and engaging practice with authenticity and informality, something that represents effective educational features.

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