IMPROVEMENT IN HIGHER EDUCATION THROUGH KM

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Abstract

Beca"knowledge" is a strategic resource that gives sustainable competitive advantage and helps to achieve long-term goals. Knowledge Management (KM) has recently received considerable attention in the computer information systems community and is continuously gaining interest by industry, enterprises and academia. knowledge management combines with information management play an important role for the success of transforming individual knowledge into organizational knowledge since we are moving into an era of "knowledge capitalism". Higher education (HE) institutions are involved in knowledge creation, dissemination and learning, so they are in the knowledge business. Now-a-days, the increasing economic importance of knowledge redefines the links among education, work and learning in Higher Education institutions. This paper presents the key concepts of human-computer interaction in knowledge management, discusses their applicability to Higher Education and proposes the creation of learning organizations in HE institutions, as an innovative way to apply KM to HE.

Keywords : KM, Higher Education, Learning Organisations.

1. INTRODUCTION

The Society is entering into an era where the future essentially will be determined by people's ability to wisely use knowledge, which is the embodiment of human intellectual capital and technology. The knowledge-based economy places great importance on the discussion and use of information and knowledge, as well as its creation. In this new economy, individuals and companies are obliged to focus on maintaining and enhancing their knowledge capital in order to innovate, and their ability to learn, adapt and change becomes a core competency for survival.

Universities and other higher education institutions are recognized to be in the knowledge business (Goddard, 1998) and increasingly they are exposed to marketplace pressures in a similar way to other businesses. Education has been seen as a foundation phase in a person's life. KM may have something to over higher education institutions. This paper proposes the innovative way to apply KM to HE. and commences with a discussion on the definition of knowledge, together with a consideration of the nature of the KM. The needs for KM in universities are analysed and the creation of learning organisations in universities is presented.

2. WHAT IS KM ?

The term "Knowledge Management" (KM) is used to describe everything from the application of new technology to the harnessing of the intellectual capital of an organisation (Sallis and Jones, 2002). It is not one single discipline; rather, it is an integration of numerous endeavours and fields of study. Rowley (2000) describes the term KM as follows: "Knowledge management is concerned with the exploitation and development of the knowledge assets of an organisation with a view to furthering the organisation's objectives. The knowledge to be managed includes both explicit, documented knowledge, and tacit, subjective knowledge. Management entails all of those processes associated with the identification, sharing, and creation of knowledge. This requires systems for the creation and maintenance of knowledge

repositories, and to cultivate and facilitate the sharing of knowledge and organisational learning. Organisations that succeed in knowledge management are likely to view knowledge as an asset and to develop organisational norms and values, which support the creation, and sharing of knowledge" (Rowley, 2000). There are many different definitions of KM, available in the literature. In general, data are considered as raw facts, while information is regarded as an organized set of data. Knowledge is perceived as meaningful information; or the understanding, awareness, familiarity acquired through study, investigation, observation or experience over the course of time (Zeleny, 2000).

In brief, KM is the management of processes that govern the creation, dissemination, and utilisation of knowledge by merging technologies, organisational structures and people to create the most effective learning, problem solving, and decision-making in an organisation. It is an individual's interpretation of information based on personal experiences, skills and competencies.

There are two main types of knowledge- explicit and tacit. Everyone has explicit and tacit knowledge. Explicit knowledge is described in formal language, like mathematical expressions and statements in textbooks. It consists of technical knowledge. Tacit knowledge is automatic, resembles intuition and is oral. It may be considered less valuable than explicit knowledge. However, the effective utilisation of tacit knowledge is essential for competitiveness, but the problem is that tacit knowledge is difficult to capture (Frappaolo et al., 2000). It is highly personalised, context sensitive and very hard to measure and manage.Learning occurs when people share their data, information and explicit and tacit knowledge. The knowledge experts convey their tacit knowledge by expressing their beliefs and perceptions, and by describing and demonstrating their skills and experience.

3. KNOWLEDGE MANAGEMENT: KEY ISSUES

Knowledge management is based on applying the fullness of an organisation knowledge to its decisions and this requires working hard to represent it, transfer it, make it accessible and encourage its use. On the other hand, Liebowitz (2000) presented a nine-step approach to KM:

1.Transform information into knowledge

2.Identify and verify knowledge

3.Capture and secure knowledge

4.Organize knowledge

5.Retrieve and apply knowledge

6.Combine knowledge

7.Create knowledge

8.Learn knowledge

9.Distribute/sell knowledge

Organization, distribution and refinement of knowledge is one of the most important issue in KM. Knowledge can be generated by data mining tools, can be acquired from third parties, or can be refined and refreshed. The collected knowledge can then be organized by indexing the knowledge elements, altering based on content and establishing linkages and relationships among the elements. Then this knowledge is integrated into a knowledge base and distributed to the decision support applications. Second important issue is the knowledge presentation. This refers to the ways knowledge is displayed to the organizational members. In general, an organization may devise different procedures to format its knowledge base. Because of the different presentation styles, organizational members often find it difficult to reconfigure, recombine and integrate knowledge from distinct and disparate sources.

Third key point is the knowledge distribution and sharing. We should always keep in mind that when knowledge within the organization is shared, it becomes cumulative. Information technology and the Internet have enabled and increased this sharing of knowledge and new, emerging technologies can further advance it.

4. KNOWLEDGE MANAGEMENT IN HIGHER EDUCATION

4.1 Introduction

Universities have traditionally had two main roles: creating knowledge and disseminating knowledge. Research has been the main vehicle for creating knowledge and teaching has been the main vehicle for disseminating knowledge. In today's rapidly-changing economic environment, the traditional role of universities as providers of knowledge is greatly challenged. Universities must recognise and respond to their changing role in a knowledge-based society. They need to be consciously and explicitly managing the processes associated with the creation of their knowledge assets, and to recognise the value of their intellectual capital to their continuing role in society(Rowley, 2000).

On the other hand, students no longer are satisfied with first phase education. Their needs are now increasingly seen to be continuous throughout a working life and embrace personal growth at all stages of an individual's life. It is now clear that the future will belong to those who can acquire and apply knowledge and skills which the global markets demand. Modern students will require regular updating of their knowledge, skills and competences. In this context, universities will be required to expand exibility and innovative learning and teaching.

4.2 The needs for knowledge management in universities

A range of innovations has been evolving since the 1980s and made knowledge management necessary for today's universities, so that they manage to successfully respond to their changing role in a knowledge-based society:

- the growth of learner centered knowledge and action learning
- the movement from \closed" to \open" knowledge systems
- the growing significance of work-related learning

Knowledge is seen as neither absolute nor universal; it is local, changing and has to be re-constructed time after time on the basis of lived, individual and social experience. It is obvious that where there is continuous change, there must also be continuous learning. According to Bourner (1998), there are at least three important implications for those concerned with higher education:

1. New knowledge is more tentative than facts that have been tried and proven over many generations. This means that the ability to test putative new knowledge has become more important.
2. As environments change more rapidly, more \knowledge" is more ephemeral. Many of today's truths become tomorrow's fallacies.
3. Much of the new knowledge that is required for problem-solving and decision making is context-specific.

In this way, KM is absolutely necessary to universities for the following reasons:

- It can create innovative relationship and link between work and education
- It can help students to more closely match their talents with current workplace demands
- It can contribute to the adaptation and assimilation of new knowledge with the existing one

- It can contribute to the re-connection of learning with experience, so that a curriculum reflects the \real time", \real place" and \real problems"; work can no longer be seen as something that happens at a later stage in life.

The important question which now arises is how KM can be adopted by universities. In the following section, it is suggested how "learning organisations" is an innovative way to apply KM to higher education.

4.3. Learning organisations in universities

Pedler et al. (1988) proposed the following definition of a learning organisation:

An organisation which facilitates the learning of all its members and continuously transforms itself. A learning organisation is one which:

- has a climate in which individual members are encouraged to learn and to develop their full potential
- extends this learning culture to include customers, suppliers and other significant stakeholders
- makes human resource development strategy central to business policy
- is a continuous process of organisational transformation.

In summary, a learning organisation is one in which the learning strategy is more than a human resource or development strategy; it is a core component of all operations.

Knowledge management through learning organizations -can represent a golden opportunity for the creation of interdisciplinary knowledge. But how can a learning organisation be created in a university?

A learning organisation works to create values, practices and procedures in which learning and working are synonymous throughout the organisation. However, we can present some of the most important features of such an organisation in a university:

- It is business-oriented, company-structured and closely linked to the marketplace and the general business environment.
- It aims to "sponsor" the continuous development of its students' core competences (mainly postgraduate students) through their participation in big research and consulting projects.
- Problem-based learning and project-based learning | as parts of lifelong learning and action learning | are of high priority for a learning organisation.
- It seeks co-operation and partnerships with large international companies and other learning organisations in the framework of research programmes or consulting projects, in order to exchange know-how, experience and innovative ideas and then transfer it to its students ("employees").
- It gives increased emphasis on knowledge capture, storage, sharing, retrieval and use. Examples of all these activities which are implemented in a learning organisation are: research, students' participation in international conferences, publications, development of knowledge repositories such as libraries, knowledge databases (including presentations, project proposals, research reports, manuals, lessons learnt, best practices), knowledge networks, expert systems for specific problem-solving and knowledge dissemination and retrieval (Metaxiotis et al., 2003), multimedia, e-mail system, team working, face-to-face discussions and work group meetings.
- New forms of Masters and PhDs by research are developed by a learning organisation. They have a more business orientation and include necessarily project work, in order to narrow the current gap between the needs and expectations of the academic and business worlds.All the above

underlies the effective operation of the learning organisation in a university as a business, where work is viewed as part of a “progressive” curriculum and not just a paid employment. Through reading, working, brainstorming and questions posed by students on “real time” and “real place” problems (knowledge sharing), professors are pushed in new creative directions (knowledge creation).

5. CONCLUSION

Nowadays it seems clear that the rate of generation of new knowledge in the world is accelerating. The increasing rate of change means that particular knowledge is not available in any literature. The literature can not keep pace with the changes. Simultaneously, work is increasingly the site where pre-formulated and “textbook knowledge” is being transformed into new knowledge and where new paradigms for knowledge and learning are emerging. In this context, the role and operation of today’s universities need to be re-fashioned in the mainstream through the use of knowledge management techniques and practices. The creation of an organisation in which knowledge management activities, such as knowledge creation, transfer and use, are of high priority seems to be the golden solution.A learning organisation, based on KM principles, facilitates the learning of all its members (students and researchers) and continuously transforms it. Due to its specific features, a learning organisation is in the position to develop students who are inquisitive, have exible thought processes, are open to new ideas and have self-motivated creativity. For students, work can no longer be seen as something that happens at a later stage in life. The meaning of work is shifting under the new circumstances, which demand learning renewal throughout a working life.

Appropriate ways to monitor the increases and decreases in the knowledge assets embedded in the organisation is part of future research. Another part is the identification of how learning can be assessed and controlled. In any case, we should not forget that lifelong learning or action learning develops all elements of human competence and is, therefore, authentically part of a progressive vision of modern life.

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