Scientific Papers, Animal Science, Series D, vol. LV
CD-ROM ISSN 2285-5769, ISSN-L 2285-5750

POLICY OF KNOWLEDGE MANAGEMENT IN UNIVERSITIES. FROM THEORY TO PRACTICE

João GOUVEIA[1], Tudor STANCIU[2], Jan SJOLIN[3]

[1]Escola Superior de Educacao de Paula Frassinetti, Rua de Gil Vicente 138, 4000 Porto, Portugalia, jlopes@esepf.pt
[2]Department of Philosophy and Political Sciences, A.I. Cuza University, Romania, B-dul Carol I, Nr.11, RO-700506 - Iaşi; T: +40 (232) 201054, tudorprojects@yahoo.com
[3]Balitc International Academy in Riga, Stockholm South University - Sodertorns Hogskola, Sodertorn 141 89 Huddinge, Sweden, j.p.sjolin@gmail.com

Corresponding author email: jlopes@esepf.pt

Abstract

Higher education plays an essential role in society, creating new knowledge, transferring it to students and fostering innovation. Mass access to higher education and the spectacular expansion of research are two concepts that become increasingly competitive and developed heavily in the recent years. If initially, the former enhanced the resources for the latter in the modern era of scientific discovery, the postmodernism brought equilibrium between the two concepts, in the production of knowledge time. Nowadays, there´s a strong consensus around the idea that there´s a new paradigm which forces people and organizations to reposition themselves. This new paradigm has evolved around concepts such as learning organizations and knowledge-based organizations, designations that emphasize teamwork, decentralization, organizational learning and knowledge. The proposed survey in this paper is the outcome of an European project whose main purpose was to help school leaders to improve ICT usage in teaching and learning, by better managing the information and knowledge available in their organizations. This expertize is now used at university level.

Key words: knowledge management, university, learning organizations

INTRODUCTION

Higher education institutions have "significant opportunities to apply knowledge management practices to support every part of their mission," [1]. Last century, a russian economist called Knodratieff helped us understand economy and its history by identifying long economic cycles (also called Kondratiev long waves or supercycles). The first economic cycle occurred between 1787 and 1842, based on the steam machine, iron, loom and textile industry. Between 1843 and 1897, railways, building materials and foundry were the economic basis for the second economic cycle. The third one started in 1989 and lasted until 1950, having as major technologies steel, electricity, mechanics, automobile industry, oil, gas production and mineral chemistry. The fourth one began after the 2nd World War, having as basic technologies nuclear energy, satellites, commercial aviation, transistor, semiconductors that contributed to important evolutions in fields like Microelectronic and chips, telecommunications, robotics, advanced chemistry, biotechnology, and so on.

Although process management is still seen as important, human capital development is now the buzz word. The main ingredient for success is knowledge. We live in a knowledge society. In fact, knowledge is increasingly recognized as the most important organizational resource. And that´s why its management is too important to be left to chance.

The last 20 years have seen a growing interest in the topic of knowledge management as a discipline. From 1997, a surge of books, magazines and websites have come onto the scene and today most large organizations have some form of knowledge management initiative, by creating knowledge teams, appointed CKOs (Chief Knowledge Officers). Knowledge is firmly on the strategic agenda.

Organizations are realizing that their real advantage lies in what they know, the knowledge of their people. In fact, organizational success depends more and more on the appropriate use and deployment of distinctive capabilities.
The work force is increasingly mobile (nobody expects to work for the same organization for the entire career), which creates problems of knowledge continuity for the organizations and places continuous learning demands on the knowledge worker.
Connectivity is not only ubiquitous but has also changed expectations; workers are expected to be on at all times and to be able to respond in minutes, not in weeks.

The 2001 survey by Knowledge Management and IDC found that of those organizations that adopt KM, the top reasons are to:
- Retain expertise of personnel (51.9%)
- Increase customer satisfaction (43.1%)
- Improve profits, grow revenues (37.5%)
- Support e-business initiatives (24.7%)
- Shorten product development cycles (23.0%)
- Provide project workspace (11.7%)

In what concerns universities, the main ground for knowledge workers, complementary reasons justify the growing importance of knowledge management. Funding for education is tighter (mainly in the economic and financial crisis that Europe has been facing since 2008), accountability is a buzz word, after OECD think tank´s suggestions and recommendations, external pressures for measurable improvements are increasing as well as demands for improved information about student outcomes. Simultaneously, the perils of information overload force all levels within a university organization to understand how they can more effectively collect, disseminate and share knowledge and transform it into effective decision making and action.
For professors, true knowledge workers who are not paid for their muscles but for their brains and the way they use it, knowledge is simultaneously an input, medium and output for their work.
And as we are about to prove, although KM may be expensive, stupidity is more.

MATERIAL AND METHOD

The survey was based on the outcome of an European project [3] aiming to help:
- Identifying major strengths and possibilities in EU VET schools;
- promoting school leaders competencies in knowledge management systems on ICT usage
- adapting a self-evaluation tool for ICT use in schools, to evaluate the strengths and weaknesses of ICT use and plan new types of approach;
- helping school leaders to understand the process and background for facilitating the design process and implementing new learning and performance environments for ICT usage that involve all learning agents (students, teachers, trainers, enterprises, etc);
- creating a monitoring system for school leaders to follow up the integration of ICT;
- implementing and rooting ICT development in the organization structural framework;
- ensuring that training needs analysis, delivery and evaluation are oriented towards the organization strategic goals;
- promoting a more user-oriented approach in teacher training;
- promoting more non-formal and informal ways of educational agents to learn and develop their ICT competences;
- implementing more effective and efficient communication systems in schools;
- enhancing the creation and sharing of ICT knowledge;
- promoting a quality frame of mind in educational agents;
- disseminating this knowledge throughout school leaders in Europe;
- guaranteeing equal opportunities for men and women.

In the same way, the main purpose of this research is to help university leaders to improve ICT usage in teaching and learning, by better managing the information and knowledge available in their organizations.
ICT information and knowledge is being used to improve teaching and learning. The survey is divided in 3 main sections (Benefits, Strategies/tools and University´s performance on ICT Knowledge Management) and a rather simple scoring system.

Scope	local (L),regional (R) national (N),european (E) international (I)
University Legal Status	public (PB) private (PR)
Area	A - AGRICULTURE, FORESTRY AND FISHING B - MINING AND QUARRYING C – MANUFACTURING D - ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY E - WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES F – CONSTRUCTION G - WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES H - TRANSPORTATION AND STORAGE I - ACCOMMODATION AND FOOD SERVICE ACTIVITIES J - INFORMATION AND COMMUNICATION K - FINANCIAL AND INSURANCE ACTIVITIES L - REAL ESTATE ACTIVITIES M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES N - ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES O - PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY P – EDUCATION Q - HUMAN HEALTH AND SOCIAL WORK ACTIVITIES R - ARTS, ENTERTAINMENT AND RECREATION S - OTHER
Size (staff)	a 20 21 a 50 51 a 250 251 a 500 501 a 2000 More than 2000
Country	

1. Main benefits of a knowledge management system for ICT usage in teaching and learning?

	Not important				Very important
Reduce costs					
Increase relevant information access					
Other...					

2. List of activities/strategies that help university members create, gather, organize, disseminate, use and exploit knowledge on ICT usage for teaching and learning

	Not important				ervery important	We don´t use
Document Management (paper and electronic)						
Email						
Phone						
Meetings						
Other.....						

3. ICT tools are being used in your university to manage knowledge on ICT usage in teaching and learning?

	Not important				Very Important	We don´t use
Content Management Systems (CMS)						
Blogs						
Document Management system						
Foruns						
Virtual Communities						
Wikis						
Other.....						

4. Knowledge Management system on ICT usage. Assesment on university performance on ICT Knowledge Management

Our university has a system for acquiring, organizing, sharing and applying knowledge on ICT usage for teaching and learning.

Strongly disagree ☐☐☐☐☐ Strongly agree

We know who are the best experts on ICT usage.

Strongly disagree ☐☐☐☐☐ Strongly agree

There´s hardly any duplication of effort in our university when it comes to ICT usage and learning.

Strongly disagree ☐☐☐☐☐ Strongly agree

In the daily work, professors have easy access to the right information at the right time, in the right place.

Strongly disagree ☐☐☐☐☐ Strongly agree

Formal networks exist to facilitate dissemination of knowledge on ICT usage for teaching and learning.

Strongly disagree ☐☐☐☐☐ Strongly agree

Communication systems and ICT tools are used to promote learning and team work.

Strongly disagree ☐☐☐☐☐ Strongly agree

Our university has got a structured knowledge repository on ICT usage for teaching and learning that is easily accessed and understood.

Strongly disagree ☐☐☐☐☐ Strongly agree

Our University Board recognizes the potential of knowledge assets on ICT usage for educational purposes and develops strategies to manage them.

Strongly disagree ☐☐☐☐☐ Strongly agree

Our University Board promotes collaborative learning on ICT usage.

Strongly disagree ☐☐☐☐☐ Strongly agree

Our university has a clear vision and strategy that articulates knowledge management on ICT usage with the university mission and main objectives.

Strongly disagree ☐☐☐☐☐ Strongly agree

All members recognize the importance of Knowledge Management on ICT usage for teaching and learning as an important asset.

Strongly disagree ☐☐☐☐☐ Strongly agree

In our university, there are formal roles and responsibilities for managing knowledge on ICT usage for teaching and learning.

Strongly disagree ☐☐☐☐☐ Strongly agree

Tacit knowledge (what professors know how to do with ICT but cannot express) is valued and transferred throughout our university.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university, there are librarians or information management staff that coordinate knowledge repositories on ICT usage and act as focal points for provision of information to support decision making.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Resources are committed for ongoing training and competencies development on ICT usage by professors.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Professors are evaluated and rewarded for sharing and reusing knowledge and information on ICT usage.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our University Board rewards all university members for *thinking outside the box.*

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In what concerns knowledge management on ICT usage, leaders model behaviors and actions through actions and not just words.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our university encourages and facilitates knowledge sharing on ICT usage.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university, there is a climate of openness and trust and people are not afraid to lose power or influence by sharing their knowledge on ICT usage.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Improving learning results is acknowledged as a major goal of knowledge management on ICT usage.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our university is driven by constant flexibility and desire to innovate.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university failure is seen as an opportunity to learn and reasonable mistakes on ICT usage are seen as investments.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our university has created ways to link knowledge management on ICT usage to learning results.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our professors are aware of the need to proactively manage knowledge on ICT usage for teaching and learning.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Knowledge management on ICT usage for teaching and learning is part of our university culture.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university collaboration is the norm and people are continuously learning how to learn together in order to improve knowledge on ICT usage for teaching and learning.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university, technology is a key enabler in ensuring that the right information is available to the right person at the right time, in the right place for the right reason.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In our university technology helps to enhance relationships and collaboration between all educational agents.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Technology is a key enabler in the creation of an institutional memory (eg. digital repositories) accessible to educational agents according to their needs.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

When a team or a teacher completes a task involving ICT and its usage, distil and document what was learned

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Technology brings the professors close to their students

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In what concerns ICT usage in teaching and learning, university members are able to capture and transfer our best practices.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our ICT staff is well prepared to maintain and technically support our information systems.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

In what concerns knowledge on ICT usage for teaching and learning, our technology helps to connect people to contents.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our university has good data and information infrastructures.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Our university has developed a specific set of indicators to manage knowledge on ICT usage in a systematic way.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

The goals for improving our knowledge on ICT usage for teaching and learning are clear and understood by everyone.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

Knowledge gaps on how to use ICT in our university are systematically identified and well-defined processes are used to close them.

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

CONCLUSIONS

Knowledge Management (KM) principles recognize that it is important for organizations to "know what they know." The true core competence of any organization is the ability to create new knowledge, learn continuously, identify and solve changing problems. We could summarize the main drivers behind the increased interest in KM in four major trends: Organizations are more multisite, multilingual and multicultural in nature; Organizations are doing more and doing it faster (increased pace and workload) also needing to work smarter as knowledge workers. And knowledge workers are increasingly being asked to think having little time to digest huge amounts of incoming data and information.

REFERENCES

[1] Kidwell, Jillinda J., Vander Linde, Karen M., and Sandra L. Johnson 2001. *Applying Corporate Knowledge Management Practices in Higher Education*. In Bernbom, Gerald, editor, Information Alchemy: The Art and Science of Knowledge Management. EDUCAUSE Leadership Series #3. San Francisco: Jossey-Bass. pp. 1-24.

[2] *Knowledge Management for Higher Education*. ERIC Digest. ERIC Clearinghouse on Higher Education Washington DC. http://www.ericdigests.org/2003-1/higher.htm

[3] LLP-LdV-ToI-2011/DK-1101 http://knowledgeandmanagement.eu