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DEVELOPING AND IMPROVING KNOWLEDGE MANAGEMENT PROCESSES IN THE EDUCATION SECTOR

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Abstract: *Considering the role of education in knowledge-based economy as a fundamental pillar, analyzing the contribution of knowledge management systems to the development and improvement of knowledge management processes is a must. There are some qualitative models used in order to achieve this goal, an important one from the perspective of the status of Romania as a European Union member. Called the McKinsey model, it was made operational by the European Committee for Standardization. The results of applying this model within an important university of Romania reveal that implementing functional knowledge management systems, projects and initiatives contributes substantially to the development of knowledge management processes.*

Key words: *knowledge management processes, McKinsey model, knowledge management initiatives.*

1. Introduction

According to IEEE [5], a knowledge management system is a class of information systems applied for organizational knowledge.

Thus, the models used in order to evaluate the efficiency of an information system may be used to evaluate the efficiency of implementing a knowledge management system, thus contributing to the development and improvement of knowledge management processes.

After studying the literature in the field, one conclusion can be drawn: because of the disparities between the theoretical and practical axes, the evaluation instruments are, in the first stage of development, mainly qualitative, incomplete and insufficiently operational.

2. Objectives

The main objective of the paper is to adjust one of the most frequently used and quoted models, the McKinsey model for evaluating the efficiency of implementing a knowledge-management system into an organization, to the realities of a higher education institution in Romania

The second objective is to apply the newly modified and adjusted model in order to evaluate the efficiency of implementing a knowledge management system into a higher education institution in Romania, starting from Romania.

3. Theoretical Background

According to a study [1], the success of a knowledge-management system and the contribution of implementing such systems to the development and improvement of

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knowledge-management processes, are evaluated at a far more abstract level, which is determined by many factors, unstructured and impossible to be managed.

A part of the syntheses of the accomplishments in the field are presented in Table 1.

The conclusion of the study was that the instruments used are too general and insufficiently operational to be used, even though the necessity for such instruments is determined.

The instruments for evaluating knowledge-management system success

Table 1

Study	**Knowledge management system**	**Performance criteria**
Gottschalk, 2000	Data deposits, executive information system, expert system, intranet	Information support for knowledge management processes: generating, accessing, transferring, sharing and codifying knowledge
Ruppel, Harrington, 2001	Intranet implementation	The implementation level for sharing knowledge
Maier, 2002	Knowledge management system	DeLone and McLean model concerning success

The most utilized model is DeLone and McLean, being also the basis for other models derived from it.

Another model, very popular among researchers, is the McKinsey Model [4].

The model was made operational by the European Committee for Standardization, consisting in a questionnaire with sets of questions used to evaluate the contribution of an efficient implementation of a knowledge-management system or initiative to the development and improvement of knowledge-management processes.

The model was developed by Tom Peters and Robert Waterman, consultants at McKinsey & Co, and consists of seven elements. Three of them are called Hard S – structure, strategy and system - and the other four – skills, staff and shared values - is called Soft S [3].

4. Materials and Models Applied

In our approach, the model used is the McKinsey model [4], because of the status of Romania as a EU member, and because it is considered complex and complete enough to contribute to the results of the study.

In order to apply this model, a questionnaire is used, and the results are important as they are situated at maximum and minimum, as there are strengths and weaknesses.

The first remark is that a study concerning the accomplishments regarding knowledge-management projects, initiatives and systems at the level of Romanian Universities was first done [2], and afterwards a single university was chosen to apply the McKinsey model, the name of the university remaining anonymous because of the wish of the university management.

The population of the Romanian university on which the questionnaire was used is 400 teaching staff and students. The techniques for establishing the population were: aleatory systematical techniques and aleatory techniques.

The questionnaire was adjusted in order to characterize the knowledge-management processes [5]: (1) creation, (2) storage, (3) sharing and (4) using knowledge and the (0) general situation.

The respondents were asked to describe their own attitude or opinion by assigning a score between 1 and 5 for each question. The seven characteristics of the model were used – (a) strategy, (b) shared values, (c) style, (d) staff, (e) skills, (f) structure and (g) system – and two other characteristics: (h) attitudes and (i) performances, in order to evaluate the knowledge-management processes and the general situation.

5. Results and Discussions

The results obtained after applying the McKinsey model are presented in Table 2. Some facts were revealed that will be presented below.

The results of applying the McKinsey model

Table 2

0		**1**	**2**	**3**	**4**	**Total**
5.0	**a.**	4.5	5.0	4.0	5.0	**4.6**
5.0	**b.**	5.0	5.0	4.0	4.1	**4.5**
5.0	**c.**	3.4	3.4	3.4	3.4	**3.4**
4.5	**d.**	3.4	1.4	1.4	4.1	**2.6**
5.0	**e.**	4.5	5.0	4.5	5.0	**4.7**
5.0	**f.**	1.0	5.0	5.0	4.6	**3.9**
4.5	**g.**	5.0	5.0	1.4	4.6	**4.0**
Xxxx	**h.**	3.5	3.5	3.6	3.5	**3.5**
Xxxx	**i.**	4.5	4.5	4.1	3.4	**4.1**

The strengths of the university from the point of view of developing and improving knowledge-management processes at the educational level are represented by strategy, shared values and skills.

This means that the university has a strong strategy regarding knowledge-management processes, and that its organizational culture is favorable to the development of the processes through implemented knowledge-management initiatives, and also that the distinctive competencies in the educational field determined the success of the system.

The weaknesses are represented by the staff and the managerial style, namely the neutral perspective on the stimulants offered, a perspective justified by the fact that the use of the system is compulsory.

From the point of view of knowledge-management processes, the strengths are represented by the storage and the use of knowledge, because of the characteristics of the universities and the fact that the system implemented is used for the educational process. The weaknesses are represented by creating and sharing knowledge.

At the individual level, the strengths are represented by creating and storing knowledge.

Also, the perception of individual performances concerning the use of the system for knowledge-management process development, namely the individual contributions to this development, is favorable.

5. Conclusions

The main conclusion is that the analyzed university evolves favorably and in a coherent manner, which determines the development and the improvement of knowledge-management processes at the educational level, through the implementation of a knowledge-management system and projects.

At the organizational level, the aspects that require maximal attention are related to the involvement of the teaching staff and students in using the system for the development and improvement of knowledge-management processes – creation and usage of knowledge.

At the individual level, the aspects that require maximal attention are related to improving the attitudes of the users regarding the system, in order to develop and improve knowledge-management processes.

References

1. Kankanhalli, A., Tan, B. C. Y: *Knowledge Management Metrics: A Review and Directions for Future Research*, International Journal of Knowledge Management, 1(2), 2005, p. 20-32.
2. Lupşa-Tătaru D.A.: *Knowledge management in higher education*. In: RECENT Journal 7(2007) No. 1, p.50-54.
3. Peters, T., Waterman, R.: *In search of excellence*. New York. Harper & Row, 1982.
4. ***European Committee for Standardization, *CEN Workshop Agreements*, Management Centre, Brussels, March 2004, available at: http://www.cenorm.be/cenorm/businessdomains/businessdomains/isss/cwa/index.asp?pClose=3. Accessed: 2009-17-01.
5. ***IEEE Standard Glossary of Software Engineering Terminology, available at: ieeexplore.ieee.org/iel1/2238/4148/00159342.pdf?arnumber=159342.Accessed: 2009-17-01.