

KNOWLEDGE MANAGEMENT PRIORITIES IN HIGHER EDUCATION: AN INSIGHT FROM A ROMANIAN ACADEMIC RESEARCH CONSORTIUM

Calin Florin BABAN¹, Marius BABAN²

¹University of Oradea, e-mail cbbaban@uoradea.ro

² University of Oradea, e-mail mbaban@uoradea.ro

Abstract—Knowledge management has lately attracted growing attention in higher education, as a response of universities to address the demands of a global society. The purpose of this study is to contribute to the development of knowledge management research in higher education, providing an understanding of how several Romanian higher education institutions have identified knowledge management priorities in their environment. This article is founded on a survey conducted among a Romanian academic community involved in the UNIKM research consortium.

Keywords—Higher education, knowledge management, priorities, UNIKM consortium.

I. INTRODUCTION

HIGHER education institutions are knowledge-based organizations, composed of a large number of people, departments and faculties. They work in a knowledge-driven environment, where they are facing the new challenges and new opportunities of the present-day society.

Loh et al. [1] or Metaxiotis and Psarras [2] suggest the development in the higher education of an organization based on knowledge management principles, that may be a solution to deal with the rapid changes of our society. However, Geng et al. [3, p.1041] conclude that knowledge management practice in universities is influenced by differences in nationwide environmental contexts.

While the idea that knowledge management might be a response of higher education to coming challenges has attracted attention lately, very few studies have been conducted in Romania.

Within this framework, this article explores how several Romanian universities adopted knowledge management priorities to achieve their organizational mission and goals.

II. IDENTIFYING KNOWLEDGE MANAGEMENT PRIORITIES IN A ROMANIAN ACADEMIC RESEARCH CONSORTIUM

What is the situation of knowledge management in the Romanian higher education reality? The Romanian higher education system includes both public and private universities, and the teaching, research and service functions have been developing rapidly lately. The policy in the Romanian higher education is developed, coordinated and applied by the Romanian Ministry of National Education. Taking into account the information posted to date on the site of this ministry, so far there are 56 accredited public universities, 37 accredited private universities, and 10 institutions having temporary accreditation.

The year 2005-2006, saw major changes in the Romanian higher education system, which are concentrated on implementing the Bologna process [4]. One main objective of the reform in the Romanian higher education was linked to the increasing autonomy of universities. Another important objective was related to the public responsibility of universities for the educational provision and its adaptation to the continuous change of the knowledge-based society.

As a result, the Romanian higher education system was correlated with the European system, using a structure based on bachelor/master/doctoral studies and the European Transferable Credit System. The mobility of students and academics is improving within the Erasmus programme, while the quality assurance of study programs is being put in place through the Romanian Agency for Quality Assurance in Higher Education.

Knowledge management in higher education is the subject of several studies published by the Romanian academic community [5], and some action has been in place for the development of knowledge management activities in universities [6]. However, no research has been conducted on how the Romanian environment

affects the practices of knowledge management in universities.

In 2008 a project called "Comparative research concerning knowledge management in the Romanian engineering education-UNIKM" was launched within Partnerships in Priority S&T Domains Programme [7]. This project was supported through the Romanian National Authority for Scientific Research.

The project brings together researchers from universities in Oradea, Bucharest, Timisoara, Cluj-Napoca in a consortium and a research institute in Bucharest. Each of the universities within the UNIKM consortium has bachelor, master and doctoral programs, and research activities.

One of the main objectives of the UNIKM Project has been to find out how the consortium addresses the knowledge management priorities, in concordance with the Romanian national realities.

For this purpose, a survey was conducted among the academic community within the UNIKM consortium. The survey format is also used in the works of several UNIKM academics [8, 9].

III. RESEARCH METHODOLOGY

The survey was e-mailed during the 2010 to the

members of the academic community involved in the UNIKM consortium. All of them responded to the survey.

For each item of knowledge management priorities, the mean was calculated and used to assign the rank order of the item. The Likert scale was used for this purpose, based on a five-point scale starting from one as the lowest value and five being the highest value.

IV. RESULTS AND DISCUSSION

The respondents were required to rank each of the five priorities of knowledge management at their university. Knowledge management priorities have been documented in previous studies [3, 10, 11]. The items in our survey were adapted to the Romanian nationwide realities based on the study of Geng et al. [3, p. 1036] and Kidwell et al. [10, p. 32-33].

Table I lists how important each of the five knowledge management priorities are within the UNIKM research consortium. The means of the five knowledge management priorities are depicted in fig. 1.

The members of the UNIKM academic community indicated the higher rank for KMP2 priority, respectively KMP1 priority. The lower rank was reported for KMP4 priority.

TABLE I.
KNOWLEDGE MANAGEMENT PRIORITIES

Item No.	Knowledge management priorities	Mean	Rank
KMP ₁	Academic research and development	4.11	2
KMP ₂	Teaching and learning	4.32	1
KMP ₃	Student services	3.34	4
KMP ₄	Administrative services	3.16	5
KMP ₅	Institutional strategic planning	3.52	3

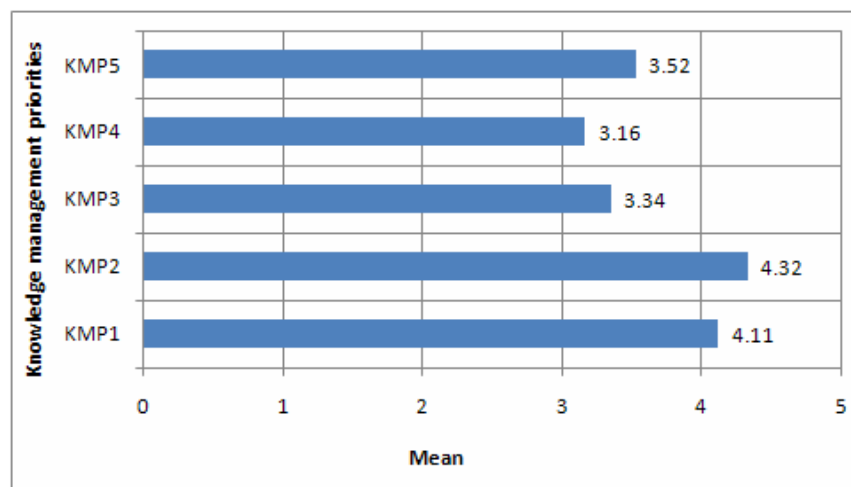


Fig. 1. The mean of the knowledge management priorities

The F statistic computed for ANOVA test [12] was $F_{KMP} = 14.44$. Taking into account the significance level

of 0.05 and degrees of freedom $df_1=4$, $df_2=215$, the critical region is $F_{0.05;4;215} = 2.41$.

The value of F ratio is located in the critical region: $F_{KMP} > F_{0.05;4;215}$. There is clear evidence, at the 0.05 significance level, that at least one of the mean of knowledge management priorities differs from the rest of the means.

Tukey's computed critical value [12] was $T_{KMP; 0.05} = 0.509$ and any pair of the means that differs by more than 0.509 are considered distinct. The matrix of multiple comparisons between the means of knowledge management priorities for the UNIKM academic community based on Tukey's test is presented in Table II. The difference of means of the knowledge management priorities are shown in fig. 2-6.

The mean of KMP2 priority is significantly different from the means of operational services (KMP3, KMP4, KMP5). The mean of KMP1 priority is also significantly different from the means of operational services (KMP3, KMP4, KMP5). The means of KMP1 and KMP2 priorities cannot be distinguished, since their differences in means are smaller than the computed Tukey's critical value. The means of KMP3, KMP4 and KMP5 priorities cannot be also distinguished.

TABLE II.
MULTIPLE COMPARISONS BETWEEN THE MEANS OF KNOWLEDGE
MANAGEMENT PRIORITIES FOR THE ACADEMIC COMMUNITY OF UNIKM
(TUKEY HSD)

Knowledge management priorities		Difference of means
KMP1	KMP2	-0.205
	KMP3	0.773*
	KMP4	0.955*
	KMP5	0.591*
	KMP1	0.205
KMP2	KMP3	0.977*
	KMP4	1.159*
	KMP5	0.795*
	KMP2	-0.773*
KMP3	KMP2	-0.977*
	KMP4	0.182
	KMP5	-0.182
	KMP3	-0.773
KMP4	KMP1	-0.955*
	KMP2	-1.159*
	KMP3	-0.182
	KMP5	-0.364
KMP5	KMP1	-0.591*
	KMP2	-0.795*
	KMP3	0.182
	KMP4	0.364

* The difference of means is significant at the 0.05 level

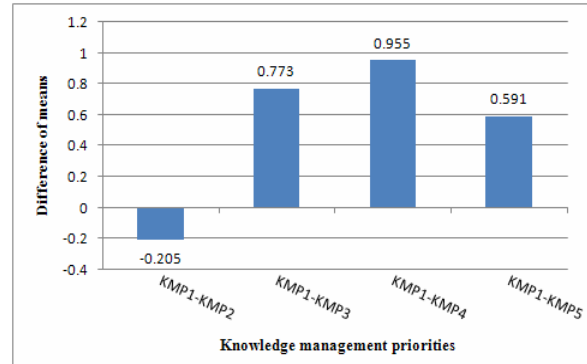


Fig. 2. The difference of means of the knowledge management priorities, KMP1-KMPi (i=2,3,4,5)

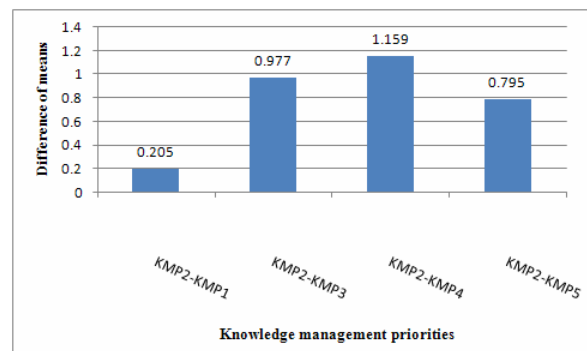


Fig. 3. The difference of means of the knowledge management priorities, KMP2-KMPi (i=1,3,4,5)

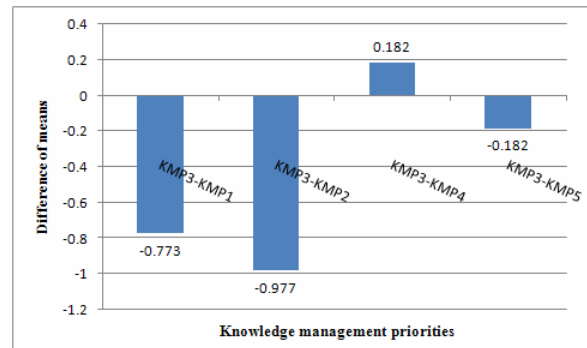


Fig. 4. The difference of means of the knowledge management priorities, KMP3-KMPi (i=1,2,4,5)

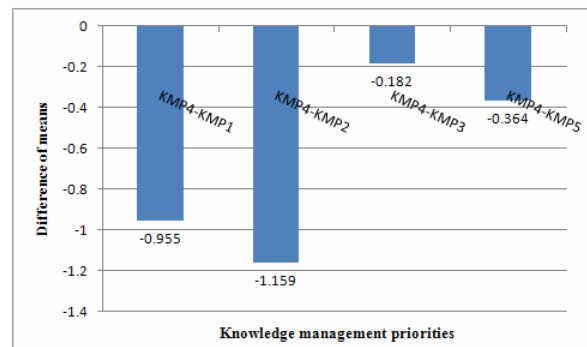


Fig. 5. The difference of means of the knowledge management priorities, KMP4-KMPi (i=1,2,3,5)

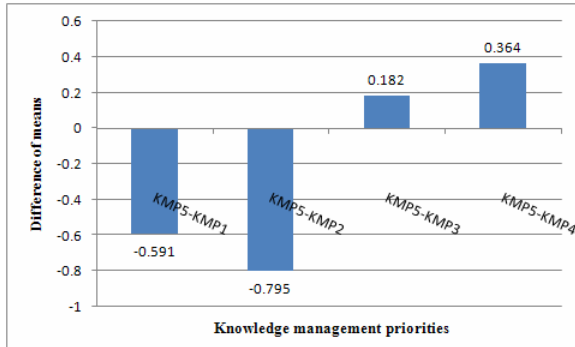


Fig. 6. The difference of means of the knowledge management priorities, KMP5-KMPi (i=1,2,3,4)

V. CONCLUSION

The knowledge management priorities in UNIKM universities must be focused on the management of knowledge that is improving teaching activities and increasing research opportunities. The academics from UNIKM consortium may embrace the practices presented by Kidwell et al. [10] and Cronin [13] to address these knowledge management priorities.

Since the study was based on a small sample of participants, it should be considered as an exploratory research, which offers one of the first insights into the universities from UNIKM consortium.

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REFERENCES

- [1] B. Loh, A.-C. Tang, T. Menkhoff, Y.W. Chay and H.-D. Evers, "Applying Knowledge Management in University Research", In *Governing and Managing Knowledge in Asia*, T. Menkhoff, H. D. Evers, and Y. W. Chay, Eds. New Jersey: World Scientific, 2005, pp. 199-226.
- [2] K. Metaxiotis, and J. Psarras, Applying Knowledge Management in Higher Education: The Creation of a Learning Organisation. *Journal of Information and Knowledge Management*, vol. 2, no.4, pp. 353-359, 2003.
- [3] Q. Geng, C. Townley, K. Huang, and J. Zhang, "Comparative knowledge management: A pilot study of Chinese and American universities", *Journal of the American Society for Information Science and Technology*, vol. 56, no. 10, pp.1031-1044, 2005.
- [4] Bologna Declaration, *The Bologna Declaration of 19 June 1999*. Retrieved December 11, 2013 from http://vechi.cnfis.ro/index_PB.html.
- [5] C.N. Bodea, and I. Andone, (Eds.), *Managementul cunoasterii in universitatea moderna*. Bucuresti: Editura ASE, 2007.
- [6] Project UNI-C (2008). Strategies, Systems, Methods and Tools for Knowledge Management in Universities. Retrieved December 11, 2013 from <http://www.uni-c.ase.ro>.
- [7] The UNIKM Project, *Comparative researches concerning knowledge management in Romanian engineering education*. Retrieved December 11, 2013 from <http://imtuoradea.ro/unikm>.
- [8] A. Buf, L. Bacali, and A. Tiganas, "Applied researches on knowledge management", *Review of Management and Economic Engineering*, vol. 10, no. 3 (41), pp. 79-91, 2011.
- [9] A. Draghici, H.K. Foldvary-Schramko, and G. Draghici, "Researches for Knowledge Management Characterization in Engineering Education", in *Proceedings of the 5th International Conference on Manufacturing Science and Education-MSE 2011*, vol. II D. M. Duse, D. P. Brindasu, and L. D. Beju, Eds. 2011, pp. 139-142.
- [10] J. Kidwell, J. K. Vander Linde, and L. Johnson, "Applying Corporate Knowledge Management Practices in Higher Education", *Educause Quarterly*, vol. 4, pp. 28-33, 2000.
- [11] Lighthouse Consulting Group, *State of the knowledge industry*. Alexandria, Va.: Lighthouse Consulting Group, 2000.
- [12] E. Cicală, *Metode de prelucrare statistică a datelor experimentale*. Timișoara: Editura Politehnică, 1999.
- [13] B. Cronin, "Knowledge management, organizational culture and Anglo-American higher education", *Journal of Information Science*, vol. 27, no. 3, pp.129-137, 2001.