

## **STRUCTURING COMPETENCES WITHIN A RESEARCH CONSORTIUM: A CASE STUDY AT UNIVERSITY OF ORADEA**

**BABAN Calin Florin, BABAN Marius**

University of Oradea, Faculty of Management and Technological Engineering,  
cbaban@uoradea.ro

**Keywords:** competences, teaching, research, student and administrative services

**Abstract:** In 2008 a projects called "Comparative researches concerning knowledge management in Romanian engineering education-UNIKM" was launched with the support of Romanian National Authority for Scientific Research. One of the objectives of the project is to assess the competences in research, teaching, student and administrative services within the UNIKM consortium. The case of University of Oradea is presented in this paper.

### **1.INTRODUCTION**

Education engineering institutions are confronted today with important challenges, and they have to respond at the provocation of the XXI century society [2, 8]. Fundamental is the way in which engineering education institutions can address these challenges and knowledge management may offer a response at the changes of the knowledge society. The opportunities that universities have to apply knowledge management are presented in [3, 6, 7]. The different possibilities to introduce knowledge management in academic engineering education are analyzed in [1, 4].

However, in Romania there have been published far too few studies on knowledge management in higher education [5], without presenting experimental data on its implementation in these institutions.

### **2. THE COMPETENCES WITHIN A RESEARCH CONSORTIUM: A SURVEY AT UNIVERSITY OF ORADEA**

Although the idea that knowledge management may be used in technical universities is challenging, in Romania there are no records of any research in this field. Therefore, in 2008 a projects called "Comparative researches concerning knowledge management in Romanian engineering education-UNIKM" was launched.

Structuring the competences in UNIKM consortium become one of the objectives of the project. The case of University of Oradea is presented next. A survey was carried out to acquire practical information to asses the competences of the team members at University of Oradea. The survey addresses the information/ collaboration/sharing possibilities in research, teaching, student and administrative services.

The survey was e-mailed to the 18 members of the team and all members responded to the survey.

### **3. ANALYSIS OF THE RESULTS**

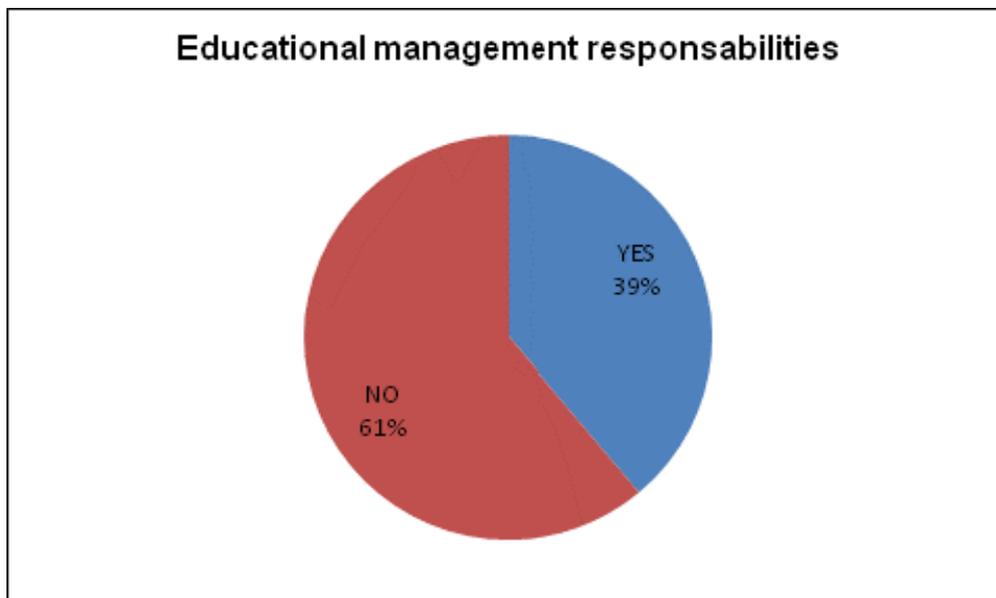
#### **3.1) Information/collaboration/sharing responsibilities of scientific research**

In their departments, 17% of the team members have had different research responsibilities (scientific secretary, research center manager, member of scientific and technological research committees, etc.)

39% of the team members have had information/collaboration/sharing of knowledge through web portal, collaborative platforms or research reports.

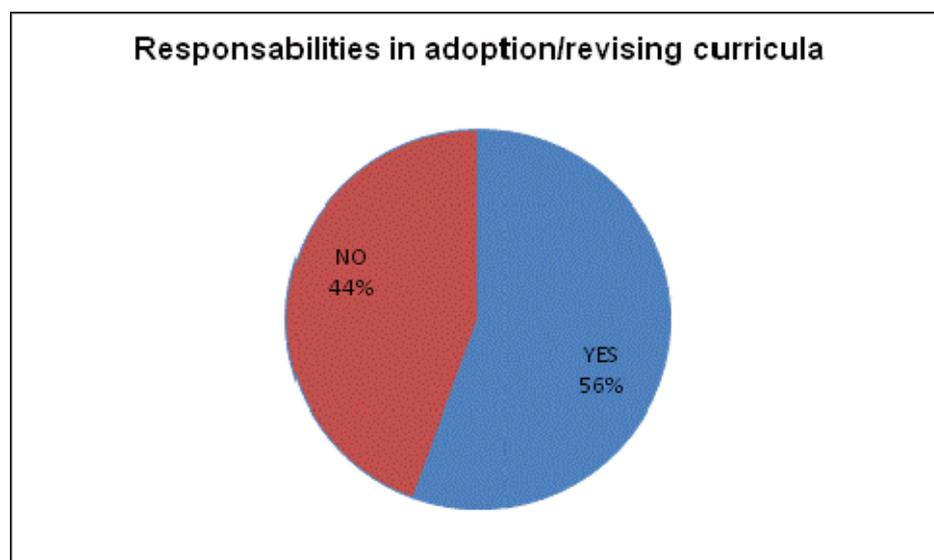
Regarding the collaboration with companies, 44% of the team members have been involved to share their knowledge.

3.2) Information/collaboration/sharing responsibilities of educational management for the interdisciplinary curriculum design and adoption/revising curricula  
Among the team members, 39% have had different responsibilities of educational management for the interdisciplinary curriculum design (figure 1).



**Figure 1. Team members responsibilities for interdisciplinary curriculum design**

56% of the team members have been involved in curricula adoption/revision, syllabus or contents of different disciplines (figure 2).



**Figure 2. Team members responsibilities in curricula adoption/revision**

3.3) Information/collaboration/sharing possibilities regarding the teaching and learning methods

The team members have used frequently the web pages of their faculties to achieve these objectives (72%), while 22% have used seldom and 6% never used this possibility.

Tutoring and mentoring from senior faculties to junior is used by 39% of the team member, 44% rarely used while 17% don't use this possibility to share the teaching and learning styles.

Discussions with psychopedagogical specialists are often employed only by 11% of the team members, most of the people don't use this possibility(50%).

The exchange of opinions with colleagues from Romania and abroad are used often by 39% of the team members. Most of them used seldom this feature (50%), while 11% never used the exchange of opinions for teaching and learning methods sharing.

#### 3.4) Information/collaboration/sharing possibilities regarding the disciplines that are taught by team member

Most of the team members used frequently the faculties or their own web pages for sharing the disciplines they are teaching (72%). Only 6% never used this possibility.

44% of the team members used the billboard at the faculty/department level to share the disciplines they are teaching, while 50% used rarely this characteristic.

The personally meeting with students is used in a very high proportion by the team member to inform students about their disciplines (94%). There is no member of the team that doesn't use this possibility.

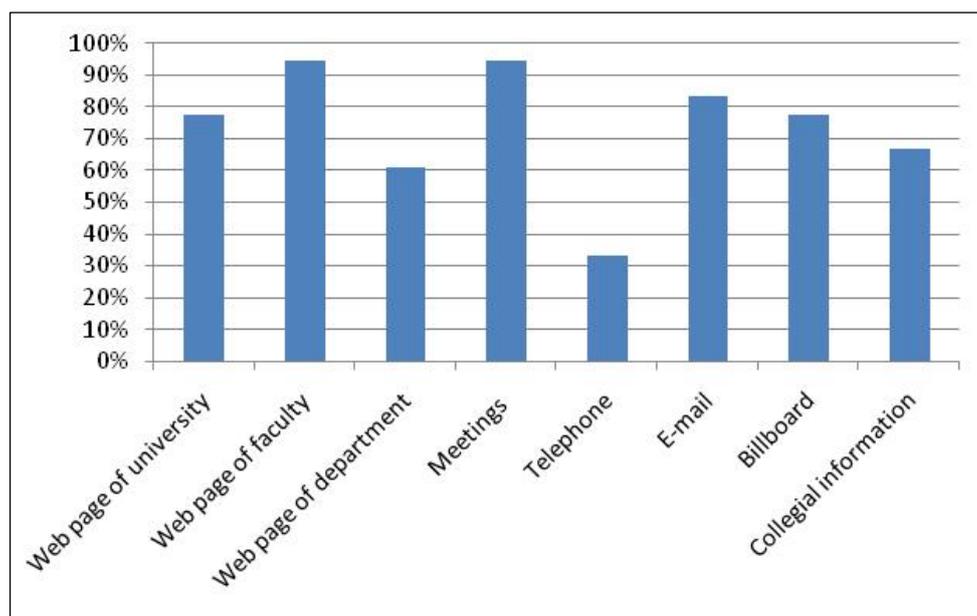
#### 3.5) Information/collaboration/sharing possibilities regarding methods of students evaluation

94% of the team members presents these possibilities at the first lecture of lab. Unfortunately, the faculties or the web pages of teaching staff is seldom (61%) or never used (17%) as possibilities to share the evaluation methods and techniques.

The evaluation methods are never presented on the billboard at the faculty/department (61%), while 22% of team members used this possibility.

#### 3.6) Student services

a) Information possibilities for students services are presented in figure 3.



**Figure 3. Information possibilities about students**

The most used ways for information are (figure 3):

- the web page of faculty and the meetings at the department/faculty level(94.44%);

- information through the e-mail (83.33%);
  - the web page of the university and the information on the billboard at the faculty/department (77.78%);
- Less used is the information through telephone (33.33%).

b) Information possibilities about career counseling of students

The following ways are used for career counseling of students:

- job market and meeting with companies, as well as information through billboard at university/faculty/department (94%);
- information through university/faculty/department web page and individual recommendation (89%);
- center for students counseling (83%);
- information through student organizations (78%).

Information e-mailed at the department and then post on the billboard is used by 50% of the team members.

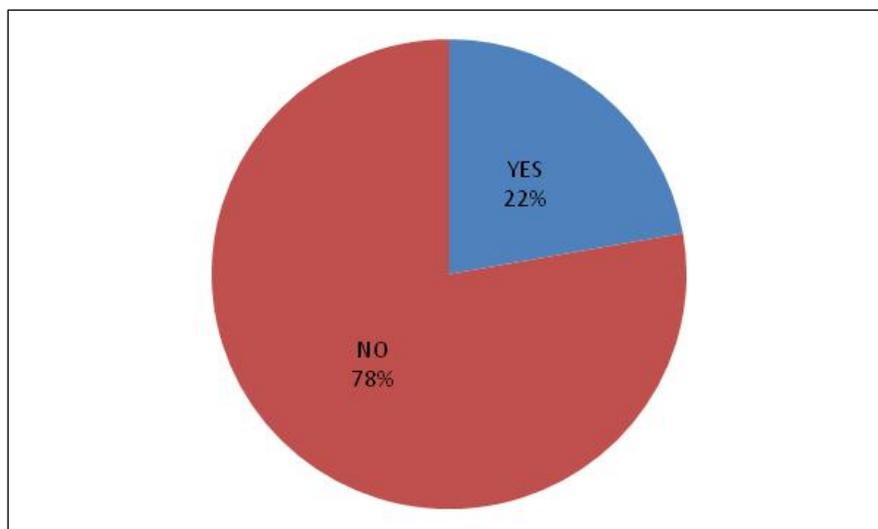
c) Information about students that graduated

The main possibility about students that graduated are databases with these students (100% of the team members used these facilities). However, the Alumni association and students organization are less used (39%, respectively 22% of the team members used these possibilities for information).

### 3.7) Administrative services

a) Implication in the administrative services

Most of the team members are not involved with administrative services, about different activities such as purchasing of equipments (78%, see figure 4).



**Figure 4. Implication in the administrative services**

b) Information regarding financial services

Face-to-face information with people from financial services (94%) and meetings at department/faculty/university (89%) are among the most used possibilities of information regarding financial services. E-mail is used in the 50% of the situations.

The university web page (39%), telephone or billboard (both with 33%) are less used to gather information about accounting services.

c) Information regarding purchasing services

Meetings at department/faculty/university and in person information with people from purchasing services are frequently used (both with 83%). E-mail is used by 56% of the respondents.

Web page of university (39%), telephone (33%) and billboard (28%) are less used for information on purchasing services.

d) Information regarding human resource services

All team members used meetings at the department/faculty/university to find information concerning human resource services. Personally information with people from human resource services (83%) and web page of university (61%) are also often used. Less used are telephone and E-mail (44%).

#### **4. CONCLUSIONS**

The UNIKM consortium is intended to become representative of a new system of resource employment. For this purpose, the competence of each partner must be evaluated.

In this paper, several competences in research, teaching, student and administrative services at University of Oradea were assessed. The results of this study show that engineering education institutions may use a knowledge management approach in all these services.

This study should be considered as an exploratory approach, which provides a first insight of several knowledge management competences at the University of Oradea. Future papers will present the knowledge management competences at the consortium level.

**Acknowledgement** –This paper was supported in the PN II “PARTNERSHIPS IN PRIORITY S&T DOMAINS PROGRAMME”, Contract number 92074/1.10.2008. Any findings, results or conclusions expressed in this article belong to authors and do not necessarily reflect the views of the Romanian National Authority for Scientific Research or Romanian National Centre for Programmes Management.

#### **5. Bibliography**

1. Agrawal, A. M. (2004). Knowledge management application in higher technical institutions in India, IAMOT 2004 International Conference Proceedings, Washington, DC, April 3-7, 2004, Retrieved January 30, 2010 from <http://www.iamot.org/conference/index.php/ocs4/paper/viewFile/982/405>
2. Akay, A.(2004). The case for renaissance engineers and renaissance in mechanical engineering education. (In Resnick, D. P. and Scott, D.S. (Eds), *The Innovative University* (pp. 131 – 144), (Pittsburg: Carnegie Mellon University Press)
3. Avram, G. Knowledge Management in the Academic Environment. Proceedings of the 2nd European Conference on Knowledge Management, Dublin, 2002, p.31-38
4. Cheng, T.F., Ho, I.H., Lin, C.Y. (2001). The introduction of knowledge management into engineering education systems, International Conference on Engineering Education, Oslo, Norway, August 6 – 10, 2001, 7E6: 8-13.
5. Istrate, E., Risnoveanu, A. Managementul cunoasterii stiintifice in cadrul institutiilor invatamant superior, Sesiunea de comunicari stiintifice cu participare internationala “Spatiul sud-est european in contextul globalizarii. Strategii XXI”, 2007, Bucuresti, 31-37
6. Kindwell, J., Vander Linde, K., Johnson, L. Applying Corporate Knowledge management Practices in Higher Education, *Educause Quarterly*, 4, 2000
7. Rowley, J. Is higher education ready for knowledge management?, *The International Journal of Educational Management*, 14(7): 325-333, 2000
8. Rugarcia, A., Felder, R.M., Woods, D.R., Stice, J.E. (2000). The future of engineering education. I. A vision for new century, *Chemical Engineering Education*, 34(1), 16-25