Continuous Learning of Information and Knowledge Management Teachers at Business Universities: Implications for City University of Seattle / Vysoká škola manažmentu

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Abstract. The dynamics of the information and knowledge management field has become tremendous over the recent two decades. That poses new challenges to educational institutions to be able to stay up-to-date with their curricula as well as to the teachers to continuously upgrade their expertise. The emergence of knowledge-based economies is moving these challenges far beyond the boundaries of academic programs and universities focused on technologies. Changing employer expectations regarding the skills of their graduates as well as new programs with IT and knowledge management emphasis launched at business universities cause that they have to pay increased attention to this area. This paper deals with the matter of continuous learning of IT teachers. It also addresses the most important pertinent issues such as the systematic approach to the problem, balance between the core and IT courses, financial limitations, and motivation specific for business universities in Central and Eastern Europe region providing concrete implications based on current professional experience of the author.

Key words: continuous learning, teaching, information technologies, knowledge management, business universities, knowledge-based society

1 Introduction

The fast development in the field of information and knowledge management poses serious challenges to the ability of educational institutions to keep up with it. This is true both for their curricula as well as faculty and does not count technological schools only. Expectations of employers towards the IT skills of graduates of business universities specifically those with IT specializations and programs might be changing soon as well.

Do these universities really have to do anything about these matters? The author of this paper has experience with teaching IT-related courses as well as with management of a team of IT faculty at a private business university in Slovakia providing IT and knowledge management specializations and programs. It seems that at least the issue of continuous learning of the faculty requires urgent attention and systematic approach. How to achieve the ability of business schools to keep up with current trends in times of limited budgets however? Are shifts in the focus of their curricula necessary at all? Answers to these questions will partially be provided in the following text.

2 Changing Curricula (?)

2.1 IT and Business Universities

The basic focus of business universities/colleges is business, management, and economics. Presence of IT elements in their curricula is a logical reflection of the growing importance of information and knowledge management in the world of business and management [9]. It varies from school to school. It is however true that almost every institution of higher education primarily focused on management or economics offers at least some IT-related programs or IT specializations.

In Slovakia, for instance, Faculty of Management, Comenius University offers Managerial Informatics program at the undergraduate level and IT management specializations as part of post-gradual studies [14]. University of Economics in Bratislava has the Faculty of Business Informatics [5]. Vysoká škola manažmentu provides IT specialization within the frame of its business administration undergraduate program, knowledge management at undergraduate, graduate and doctoral levels, and a dual IT management baccalaureate program with pending local accreditation [16].

Situation outside Slovakia is very similar. Vysoká škola ekonomická (University of Economics) in Prague for instance has the Faculty of Informatics and Statistics. Subjects taught include information technologies, information management, knowledge systems, and quantitative methods (statistics, econometrics, operational research and demography) [15]. Also the establishing American partner of Vysoká škola manažmentu City University of Seattle offers undergraduate and graduate degrees in computer science within the frame of its School of Management [2].

2.2 IT vs. Business Focus

Problem number one for business schools regarding their IT-related educational initiatives is the program content. To which extent the content of the IT courses, specializations, and programs should be differentiated from the business core? There are three perspectives of looking at this problem.

One is availability of human resources that we deal with in Chapter 3.

The second is the student profile. Students choosing business schools generally tend more to the core (business, economy, management) than to various specializations including IT. On the other hand, motivation of 18-year-old students to choose a concrete school is not always clear. New professional interests can still be aroused by the universities.

Even more important is however the view of the most important school customers – employers. These expect that business schools with specializations and IT-related programs produce graduates with substantially better skills in favor of information management including some technical/engineering background.

Is the problem just differentiation of programs or should business schools go further and redesign their existing programs to be more IT oriented or their IT courses to be more technology oriented? Charts 2.1 and 2.2 compare the key educational baccalaureate and master programs of Vysoká škola manažmentu (business administration and knowledge management) [16]. It is obvious that differentiation might be a problem at least for its undergraduate programs (yellow highlight). Both levels of business management programs might also have problems with occurrence of IT courses in their curricula (green highlight).

The level of differentiation at the master level looks much better. The issue at this level however is whether the course content is deep enough from the information and knowledge management skill perspective to satisfy the needs of the potential employers of the program graduates. This is how the #2 and #3 perspectives of the problem analyzed in this part relate. Some professors, taking a look at the state exam questions, say that the depth of the IT and KM courses is unsatisfactory. On the other hand, some say that the level of differentiation as well as the depth of the IT and KM courses is OK for a business school. Especially knowledge management stands somewhere at the border of technology and management as the experiences of the KM leaders such as British Airways suggest [1]. Knowledge management by definition is understood as business management based on knowledge or knowledge-oriented business management [8].

However, the school in cooperation with its American partner City University of Seattle just recently developed an undergraduate program in information system management and is ready to undergo the accreditation process in Slovakia. Its program plan (Chart 2.3) seems to reflect the tendency of growing digitalization of businesses and emergence of knowledge-based economies in which information and knowledge management/application are the decisive factors of competitiveness [8]. On the other hand, this program will become far more sensitive on the main matter of this paper – readiness and continuous learning of the faculty.

Chart 2.1: Comparison of undergraduate BA vs. KM programs at Vysoká škola manažmentu.

Business Administration Program

Year 1	
Code	**Courses**
BC 200s	Written Communication & Critical Thinking
CS 201s	IT for Managers
CO 210s	Communication for Managers
MTH 110s	Introduction to Statistics
MG 201s	Introduction to Management
MG 210s	Business Code
SSC 220s	Microeconomics
SSC 221s	Macroeconomics
MTH 155s	Algebra
SCI 215s	Environmental Management
	Elective I
	Elective II
Year 2	
AC 115s	Introduction to Accounting
MTH 119s	Mathematics
BSC 203s	Labor Code
BE 300s	Business English
INT 301s	International Relations
INT 305s	European Union
BC 303s	Interpretation of Statistics & Data
MK 300s	Introduction to Marketing
BSC 401s	Financial Accounting
BSM 406s	Business Economics
	Elective III
	Elective IV
Year 3	
INT302s	International Economics
	Elective V
BSC 402s	Financing Organizations
BSC 407s	Effective Organization
IS 330s	Information Systems
HR 405s	Human Resource Management
BSM 404s	International Business
BSM 405s	Operational Management
BSM 493As	Thesis Seminar A
BSM 493Bs	Thesis Seminar B
BSM 494Vs	State Exam Seminar
BSM 495s	Strategic Management

Knowledge Management Program

Year 1	
Code	**Courses**
BC 200s	Written Communication & Critical Thinking
CS 201s	IT for Managers
KM 200s	Algorithms and Programming
MTH 110s	Introduction to Statistics
MG 201s	Introduction to Management
BSC 203s	Labor Code
SSC 220s	Microeconomics
MTH 155s	Algebra
SSC 221s	Macroeconomics
AC 115s	Introduction to Accounting
	Elective I
	Elective II
Year 2	
MG 308s	Introduction to KM
BE 300s	Business English
BSM 404s	International Business
INT 305s	European Union
BC 303s	Interpretation of Statistics & Data
MK 300s	Introduction to Marketing
	Elective III
BSC 401s	Financial Accounting
MB 300s	Finance and Currency
INT302s	International Economics
MTH 119s	Mathematics
	Elective IV
Year 3	
	Elective V
BSC 402s	Financing Organizations
BSC 407s	Effective Organization
IS 330s	Information Systems
CS 416s	Applications and Data Management
EC 400s	E-Commerce
BSM 405s	Operational Management
PM 401s	Introduction to Project Management
BSM 493As	Thesis Seminar A
BSM 493Bs	Thesis Seminar B
BSM 494Vs	State Exam Seminar
BSM 495s	Strategic Management

Source: Vysoká škola manažmentu v Trenčíne, official web page (http://www.vsm.sk).

Chart 2.2: Comparison of graduate BA vs. KM programs at Vysoká škola manažmentu.

Business Administration Program

Year 1	
Code	**Courses**
MC 511s	Managerial Communication & Research Methodology
MC 506s	Quantitative Methods for Managers
MC 509s	High-Performing Organizations
MB 545s	Marketing Management
MBA 531s	Managerial Economics
MC 573s	International Business
MC 550s	Operations Management & Logistics
MBA 535s	Managerial Accounting
MC 551s	Export Management
	Elective I
	Elective II
	Elective III
Year 2	
MBA 540s	Financial Management
PM 511s	Complex Quality Management
DSM 594A	Thesis Seminar I
MC 578s	Risk Management
MC 584s	Strategic Human Resource Management
DSM 594B	Thesis Seminar II
PM 501s	Project Management
MC 600s	Business Strategy
MC 699s	State Exam Seminar
	Elective IV
	Elective V

Knowledge Management Program

Year 1	
Code	**Courses**
MC 511s	Managerial Communication & Research Methodology
MC 506s	Quantitative Methods for Managers
MC 509s	High-Performing Organizations
KM 502s	Databases and Information Systems
MBA 535s	Managerial Accounting
MC 573s	International Business
MC 516s	Management Information Systems
MBA 540s	Financial Management
KM 508s	KM Systems
	Elective I
	Elective II
	Elective III
Year 2	
KM 504s	E-Commerce & E-Business
KM 503s	Knowledge Engineering
DSM 594A	Thesis Seminar I
MC 550s	Operations Management & Logistics
KM 505s	Knowledge Management
DSM 594B	Thesis Seminar II
KM 506s	Knowledge Discovery in Databases
MC 600s	Business Strategy
MC 699s	State Exam Seminar
	Elective IV
	Elective V

Source: Vysoká škola manažmentu v Trenčíne, official web page (http://www.vsm.sk).

Chart 2.3: Curriculum of the dual undergraduate program of Vysoká škola manažmentu and City University of Seattle "Management of Information Systems"

Program in the Slovak language		Program in the English language	
Code	**Course title**	**Code**	**Course title**
MTH 110s	Introduction to Statistics	MTH 110	Introduction to Statistics
BSC 203s	Labor Code	BSC 203s	Labor Code
BC 200s	Professional Written Communication and Critical Thinking	ENG 211	Intermediate Composition
ENG 01/	English (elective)	SCI 215	Environmental Science
SSC 220s	Principles of Microeconomics	SSC 220	Principles of Microeconomics
SSC 221s	Principles of Macroeconomics	SSC 221	Principles of Macroeconomics
MTH 220s	Calculus	MTH 220	Calculus
ENG 02/	English (elective)	ENG 290	Advanced Writing and Research
AC 115s	Fundamentals of Accounting	AC 215	Fundamentals of Accounting
MG 201s	Introduction to Function of Management	MG 201	Introduction to Function of Management
CS 201s	IT for Managers	CS 201	IT for Managers
IS 201	Fundamentals of Computing	IS 201	Fundamentals of Computing
ENG 03/	English (elective)	BC 301	Critical Thinking
ENG 04/	English (elective)	BC 302	Professional Communications
PS 302s	Human Computer Interaction	PS 302s	Human Computer Interaction
BC 303s	Statistics	BC 303	Statistics
IS 305s	Technical Communications	IS 305	Technical Communications
BE 300	Business English	BC 306	Ethics and Leadership
IS 320	Project/Change Management	IS 320	Project/Change Management
IS 330s	Information Systems	IS 330	Information Systems
IS 340s	Operating Systems	IS 340	Operating Systems
IS 345s	Information Security	IS 345	Information Security
IS 350s	Systems Analysis and Design	IS 350	Systems Analysis and Design
IS 360s	Database Technologies	IS 360	Database Technologies
BSC 401s	Interpretation of Financial Statements	BSC 401	Interpretation of Financial Statements
PS 402s	Principles of Corporate Finance	PS 402s	Principles of Corporate Finance
PS 406s	Business Economics and IS	PS 406s	Business Economics and IS
BSM 493a	Thesis Seminar A	BSM 493a	Thesis Seminar A
PS 407s	Effective organization and IS	PS 407s	Effective Organization and IS
IS 410s	Programming	IS 410	Programming
IS 420s	Web Design	IS 420	Web Design
BSM 493b	Thesis Seminar B	BSM 493b	Thesis Seminar B
PS 421s	Web Marketing	PS 421s	Web Marketing
IS 440s	Quality Assurance	IS 440	Quality Assurance
BSM 494s	State Exam Seminar	BSM 494	State Exam Seminar
IS 480s	Capstone	IS 480	Capstone

Source: HVORECKÝ, J. 2010. Project Introduction of the undergraduate study program "Management of Information Systems" at VŠM [7].

3 IT Faculty at Business Universities

3.1 IT Faculty Availability

The most fundamental problem is availability of IT teachers generally. In the Central and Easter European region, IT sector is one with the highest salary level of all sectors in economy. Statistics in Slovakia confirm this fact. With the average monthly salary at about the level of 1.700 EUR, IT experts make approximately twice as much as average university teachers [13]. Fortunately, universities including the ones aimed at business are still able to attract enough internal and external people ready to share their knowledge in this area.

For some this is however becoming still bigger and bigger problem. It would be a "politically" very sensitive matter to deal with the problem by trying to motivate them through salary differentiation between the IT and non-IT faculty. With the growing emphasis on IT, business universities seem to be in even more disadvantageous position in comparison to other institutions of higher education.

3.2 Being Up-To-Date

Hiring faculty coming from various IT practices is one way to stay up to date with the knowledge in the area they are transferring to their students. Drawback of this strategy is obvious. People coming from practice are usually not capable of very high teaching commitments and their area of expertise is sometimes quite narrow.

Problem of their internal colleagues is recency or upgrade of their knowledge. The field is so dynamic that the members of IT departments have to follow the current trends more intensively than other pedagogical employees. With the pace we have been witnessing over the last two decades, it is becoming clear for the universities they will have to setup a systematic way of motivating and training these employees.

Specificity of business schools isn't just in the quantitative part of the problem indicated above. As mentioned, IT teachers have to undergo training more frequently than probably any of their colleagues. Is this the reasons for the universities to devote special budgets for IT departments? With the changing emphasis on IT at business schools, changing the patterns of resources distribution will have to become a serious alternative for these institutions regardless of the sensitivity of the issue.

Even if money is (or becomes) available (either coming from school budgets, sponsors, or through grants), questionable remains the motivation of the teachers. Systematic training as well as deepening knowledge through research and participation in conferences takes time and sometimes these people do not have other option than to do it in their free time. Academics generally are more ready to devote time to development activities. But deans have to carry in mind that this also has some limitations.

4 Implications for Vysoká škola manažmentu / City University of Seattle

This part provides an overview of the areas that might be important for Vysoká škola manažmentu / City University of Seattle in their effort to cope with the IT faculty continuous learning problem. As this paper arises as a contribution to the knowledge management workshop, it also applies some knowledge management principles.

First, it sets a frame for a systematic approach to the problem. Also, it looks at the problem from various perspectives and tries to address issues such as motivation and budget constraints by providing solutions promoted by the field of knowledge management and successfully applied by companies with time-proven KM programs.

These recommendations come in the right time as the institution is in front of the accreditation of its IS Management as well as reaccreditation of its KM programs.

4.1 Curriculum Considerations

As to the program content, the school has to consider several areas:

1. Is the continuing IT diversification appropriate for a business university (both knowledge- and resource-wise)?
2. Are the outcomes of our programs responsive to the needs of the labor market especially IT/KM-wise?
3. Are the business administration and knowledge management programs at both undergraduate and graduate level differentiated enough from one another (e. g. are four IT/KM courses enough to differentiate the baccalaureate KM from the BA program)?

4. Are existing IT/KM courses to be redesigned to go in-depth more or to be more technologically oriented?
5. Is there enough IT courses in our existing programs (e. g. is two IT courses at the undergraduate level and none at the master level OK for modern business administration education?)
6. Do the programs provide students with opportunities for exchange stays, practicums/internships in the IT/KM fields?

4.2 Faculty Needs

Faculty needs can be viewed both quantitatively and qualitatively:

1. Are we able to cover the changing IT/KM teaching needs with the current team of faculty?
2. Are we able to attract new faculty (e. g. when the needs of the new IT program exceed our current possibilities?)
3. Are the skills and knowledge of the current teachers sufficient to prepare graduates with the skills required by the employers?
4. How are we going to make sure that the skills and knowledge remain up-to-date?
5. How are we going to make sure that the teachers will be motivated to stay up-to-date with their competences?

4.3 Proposed Solutions

1. Changes in curricula should be subject to discussion of the IT department (katedra). Proposals for changes have to be made by the teachers and built into the curricula and syllabi before the accreditation.
2. Special emphasis has to be put on the depth and practical outcomes of IT and KM courses.
3. Professional development of IT faculty might include:
    a. Research and publication activities
    b. Participation in conferences
    c. Exchange stays at top institutions in the area (universities, businesses, research centers etc.)
    d. Training on particular topics or products as well as further systematic education
    e. Frequent and systematic internal information and knowledge exchange

4.4 Dealing with Budget Constraints

The practical conclusions and recommendations of this paper consider the real situation in the higher education sector in Central and Eastern Europe, specifically the private in Slovakia. That includes but is not limited to dealing with financial limitations.

On one hand, there are opportunities that decrease the pressure on university budgets. Among them, there is utilization of variety of grants such as the tools of EU Lifelong Learning Programs. “The general objective of the Lifelong Learning Programme is to contribute through lifelong learning to the development of the Community as an advanced knowledge-based society, with sustainable economic development, more and better jobs and greater social cohesion, while ensuring good protection of the environment for future generations. In particular, it aims to foster interchange, cooperation and mobility between education and training systems within the Community so that they become a world quality reference” [4]. Erasmus is one of the tools providing opportunities for both students and faculty. Teachers can teach abroad and participate in trainings in schools and businesses [4]. Through these tools, universities can achieve higher qualification for their teachers. These as well as other tools, projects, and institutions also help them get new valuable coworkers at least for some time. Another example of such project provide information and assistance to mobile researchers is EURACCESS [6].

Contacts between businesses and educational institutions can also bring mutually beneficial results. For instance, cooperation with the leading software producers might mean a free access and a chance for a hands-on training for students for the tools they will most probably have to work with after they finish schools. These producers often provide a free access to training also for the teachers. Good examples of such cooperation are Microsoft, Oracle [11] or SAP [12]. Communicating and preparing contracts with these providers should be the responsibility of the department head in close cooperation with the school management.

As indicated above, university teachers are generally more self-motivated and willing to upgrade their knowledge even at the expense of their free time. Universities should choose new teachers carefully and test their readiness for lifelong learning even before they hire them.

In spite of the above mentioned and although there are many opportunities today for universities to pay for development of their faculty from other resources than from their own budgets that does not mean that they should not allocate finance for this purpose. There should be a system of internal contributions to the teachers either in form of cash or decreasing the teaching loads. Departments (katedras) should have own budget and system of its distribution for the purposes described above. The current system used at the school needs decentralization so departments know how big their budget is a time ahead. Teachers can consequently propose activities themselves before each academic year and, after making sure that the teacher's proposal fits the needs and possibilities of the department, its head can grant approval for its realization. The process can also go the opposite direction. As soon as the department head finds out there is a need for development in some areas, he or she might propose action. Similarly, it is going to be the department head's reponsibility to get a portion of the overall development budget appropriate for the purposes of his or her department. Based on the specifics described in previous parts, this will be of particular importance for the IT department of Vysoká škola manažmentu.

5 Conclusion

Continuous learning is one of the basic pillars of a knowledge-based economy. Although many individuals, companies, institutions and even countries do not take this fact seriously in spite of talking about building knowledge societies quite a lot there are areas for which lifelong education is a must. One of such areas is education itself. Educational institutions and educators at any level have to make sure that their competences are up-to-date and responsive to the needs of the students or purpose of education. Importance of the continuous learning grows especially with the sectors showing increased dynamics. One of such sectors is information management. Because of the growing impact of information technologies on business and management, business universities dedicate more space to them in their academic programs.

The aim of this paper was to analyze the situation with IT topics in the curricula of business universities and their preparedness to provide quality education in this field especially from the point of view of faculty training. It raised some important questions for consideration and provided implications for Vysoká škola manažmentu / City University of Seattle. Some of its findings can however be generalized as the situation of other school in Slovakia and the whole Central and Eastern European region is similar. It is natural however that before universities will be able to come up with a generally acceptable and applicable model this matter will require discussion on institutional, national, and even international level.

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