

KNOWLEDGE WORKERS – THE MODERN WORKERS PROTOTYPE IN PRESENT AND FUTURE ORGANIZATION

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Abstract. *The paper aim is to interpret and define the concept of the „knowledge worker” with reference to the context of post-industrial transformation (new economy, information/ knowledge). In the new economy a certain category of specialists, called knowledge-based specialists is emerging. The usual employee works with his hands and produce goods or services. Instead a knowledge worker works with its head instead its hands and produces ideas, knowledge and information. Terms like knowledge work, knowledge workers, and knowledge intensive firms point to emerging social structures and processes in organisations. This focus allows us to analyse organisations in ways that differ from the notions involving less dynamic forms of organisational configurations.*

Keywords: *knowledge, knowledge workers, prototype, organization.*

JEL Classification: D83

1. Introduction

In the new economy a certain category of specialists, called knowledge wrkers in emerging. They constantely renew thei knowledge through continous learning. Each company's future depends on its transformation into a learning organization, and their success will depend on the effective use of talented people. The organisations that will not create a generative learning culture, will not adapt fast enough, will not face the challenges of the environment in which they operate. Therefore, the learning and improvement have the goal the orientation to innovation, towards different and creative solutions and preparation of the responses to different situations. We face complex problems are as effects of several causes. People must learn to solve the problems by their own and they have to be aware that in their ability to learn, to develop unique and individual capacities are kept many answers. We are heading for an era of human freedom, responsibility and intelligence. The learning ability of the organization's members must be rediscovered and revived. It is necessary for learning to become a background for change.

2. What is a knowledge worker?

In a context in which knowledge is consider “the most critical resource in any developing country” (Millar, Choi, 2010, p. 760), the business environment becomes unpredictable and the traditional models for anticipating and adapting to the market evolution are demonstrating its limitations. As a result, the attention is moved towards knowledge owners – human resources. Once again, its importance in the organizational environment it's highlighted.

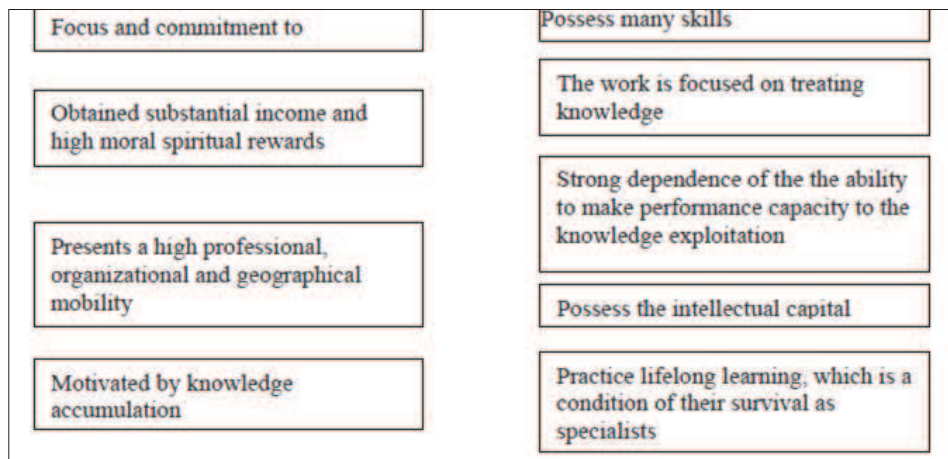


Figure 1: Characteristics of Knowledge workers

Source: Nicolescu, O., Nicolescu, L., The knowledge economy, business and management, Economic Publishing, 2005, p. 65

The characteristics listed in the figure conclude that knowledge-based specialists are both owners of the intellectual capital and active human resources participating in economic activities.

The knowledge workers possess knowledge and they constantly renew them through continuous learning in order to maintain their title of knowledge workers.

The productivity and work performance of the knowledge workers lies in the collection, assimilation, creation, use and exploitation of knowledge.

The knowledge workers present high mobility, meaning that they can change their job to another post or function within the same organization or in a different organization, they can change their profession, being available to change their home for their job.

Knowledge-based specialists are dedicated people to their job, get high incomes in the form of salaries, bonuses, shares in companies in which they work, concomitantly with a special moral treatment, all these rewards reflecting the knowledge and the intellectual capital they hold.

In the knowledge based economy, the specialized workforce is well trained in handling data, information, knowledge, which will lead to demand for careers such as scientists, engineers, chemists, biologists, mathematicians, scientific inventors etc.

3. Higher education institutions, creators of the future knowledge workers

Considering the specificity of the new economic environment than we can agree that „universities have become power drivers of change and are critical to local and regional development because they produce people with knowledge and skills, generate new knowledge and import it from diverse sources and apply knowledge in a range of environments” (Bosetti & Walker, 2010, p. 15). In other words, the higher education institutions are the ones that are creating the future knowledge workers

who are going to become a part of the economic environment once they will come out on the labor market.

So the importance of the higher education institutions in the knowledge economy is growing fast because it is not only influences the individual's life but also the organizational performance. Higher education institutions in order to be efficient and to assume its responsibility in front of individuals, should emphasize not only the acquisition of knowledge but also the development of interpersonal skills.

In this context, economic and business higher education must be oriented towards developing graduates capable to adapt to the requirements of a rapidly changing working environment. So, the courses taught should not be confined only to the transmission of basic economic knowledge but also to the creation of skills which will allow the future graduates to express themselves, to make oral presentation, to write a report or a business letter.

The future graduates should be able to use what they have learned during their studies, should be capable of sharing information with others and adapting to the challenges that are currently appearing in a dynamic environment like the one that characterizes the knowledge economy.

In the new economy context, higher education institutions should teach students how to apply what they learn, how to make the professional knowledge circulates in the interactions they initiate with others and how to incorporate what they know in organizational products, services, products and business relationships.

4. Methodology

The purpose of the article is to determine if economic and business higher education institutions contributes to the creation of the future knowledge worker that organizations need in the new economy.

The specific objectives that had been taken into account were:

- to identify the most important skills of a knowledge worker,
- to define the employee prototype that any company looks for,
- to determine the elements upon which the courses are focusing on,
- to identify the skills developed during taking courses.

In order to achieve this goal a case study was developed. After analyzing options in this field, we selected the Faculty of Economic Science from "Lucian Blaga" University of Sibiu to be the unit of analysis.

"Lucian Blaga" University of Sibiu is a center of academic excellence and social renewal, with its over 20000 students, has made its intellectual identity known all over the world, and it also represents a major provider of future economists for labor market.

We applied a content analysis to 30 courses taught to undergraduates in Faculty of Economic Science from "Lucian Blaga" University of Sibiu. We applied the analysis to courses that are taught to students from the Faculty of Economic Science from "Lucian Blaga" University of Sibiu in order to identify the skills and competencies that students will develop during their courses. We had taken into consideration only the disciplines from the economic profile because we wanted to outline the "real" image of the future economist. The matters of investigation were education goals, practical assignments topics, teaching and evaluating methods.

The education goals were analyzed from the perspective of the future knowledge worker profile in order to see if skills and competence which business environment

searches for are the same developed by the disciplines taught in Faculty of Economic Science.

5. Research results

After analyzing different articles published in this field, we discover that the economic higher education is oriented towards creating specialized knowledge, the educational programs are still focusing on the acquisition of knowledge and not on learning the future graduates how to use what they know. The teaching efforts are still oriented towards explicit knowledge even though in the current economy the tacit knowledge is the one that makes the difference.

Given the complexity and uncertainty of the current business environment (Audia et. al., 2000, Brătianu & Vasilache, 2009, Babüroglu et. al., 2010, Narula & mUpadhyay, 2010), creating knowledge is not enough. As a result, the economic and business higher education should not focus only on managing and disseminating basic knowledge about economic phenomena and specialized knowledge (Hargreaves, D.H., 1999, Jenks, C.L., 2004) but also on developing a series of skills and abilities that will help any graduate to transpose his/hers knowledge into practice.

The skills and abilities that the future economists should develop during their studies are presented in Table 1.

Table 1: Competencies that students should develop during courses

Author	Year	Skills and abilities
Dunne, E. et. al.	1997	<ul style="list-style-type: none"> • communication skills; • study skills; • problem – solving; • political and economical literacy; • using ICT; • networking; • coping with uncertainty.
Hargreaves, D.H.	1999	<ul style="list-style-type: none"> • flexibility; • networking; • creativity; • learning skills.
Jenks, C.L.	2004	<ul style="list-style-type: none"> • critical thinking; • creativity; • sensitivity; • respect; • appreciation of other points of view; • interacting and working cooperatively and productively with others.
Johnson, D.	2006	<ul style="list-style-type: none"> • <i>technology skills</i> (using informational and communicational technology in order to collaborate, learn, solve problems.

Author	Year	Skills and abilities
		make decisions, construct models, produce creative works and interact with peers, experts and other audience), <ul style="list-style-type: none"> • <i>information problem-solving skills and higher-order thinking skills</i> (seeking information, using information creatively, demonstrate, interpret, analyze, compare, estimate), • <i>conceptual skills</i> (seeing the large picture, synthesizing information, being empathetic).
Brătianu, C., Shook, C.L.	2006	<ul style="list-style-type: none"> • critical thinking, • strategic analysis.
Lindberg, M.E.	2008	<ul style="list-style-type: none"> • risk-taking; • teamwork skills; • flexibility; • strategic analysis.
Uluorta, H., Quill, L.	2009	<ul style="list-style-type: none"> • flexibility; • risk-taking; • use of ICT; • innovation; • learning skills.
Sahlberg, P., Boce, E.,	2010	<ul style="list-style-type: none"> • broad cognitive learning, • communication and collaborative skills, • risk-taking, • creativity, • innovation.

Source: Hargreaves, D.H., 1999, Jenks, C.L., 2004

The most important and frequent skills identified are:

- *learning skills* – which will help the future economist to keep in touch with what is happening in the real world and, on the same time, will facilitate his adaptation to a rapidly changing environment;
- *technology skills* – which will help the future economist to obtain, disseminate and process information;
- *teamwork skills* – which will facilitate the knowledge creation, acquisition and dissemination;
- *critical thinking* – which will reflect graduate's capacity of analysis and synthesis complex information and his/hers ability of analyzing the same situation from different perspectives.

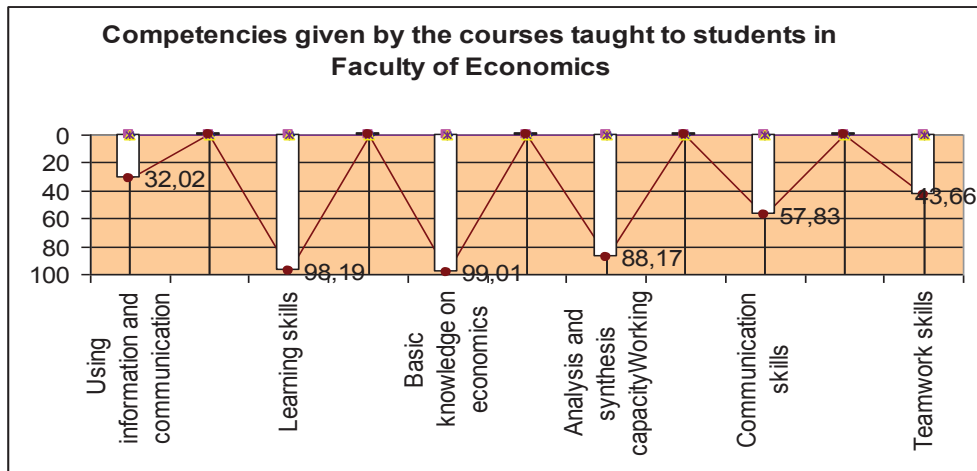


Figure 2: Competencies given by the courses taught to students in Faculty of Economic Science

Source: Author conception

As it can be seen in Figure 2, most disciplines aim to create basic knowledge about economic phenomena (100%), to build specialized knowledge (99,01%), to develop learning skills (98,19%), the capacity of analysis and synthesis (88,17%).

Building the basic knowledge about the economic phenomena is the main objective of the disciplines that are taught during the first year of study while developing knowledge and creating the specialized ones are the fundamental purpose of the disciplines that students are starting to study from the second year.

On the other hand, it appears that the disciplines taught to students are focusing on developing learning skills. In other words, they are preparing the future graduate for a rapidly changing environment by teaching them that learning is continuous process and in order to adapt and be successful they must always be informed.

Despite all these there are a couple of vulnerabilities which are targeting communication and the use of information and communication (ICT). These represent the basic elements in an economic environment which is characterized by interdependences, increased informational flows and uncertainty.

So, although world's economies are increasingly interlinked are becoming more dependent on ICT, only 32,02% of the analyzed disciplines seem to be concern about teaching students how to use ICT in a productive way. 57,83% of the analyzed courses aim to develop written and oral communications skills. From this point of view it can be argued that graduates from these educational programs will fail to share with others what they know.

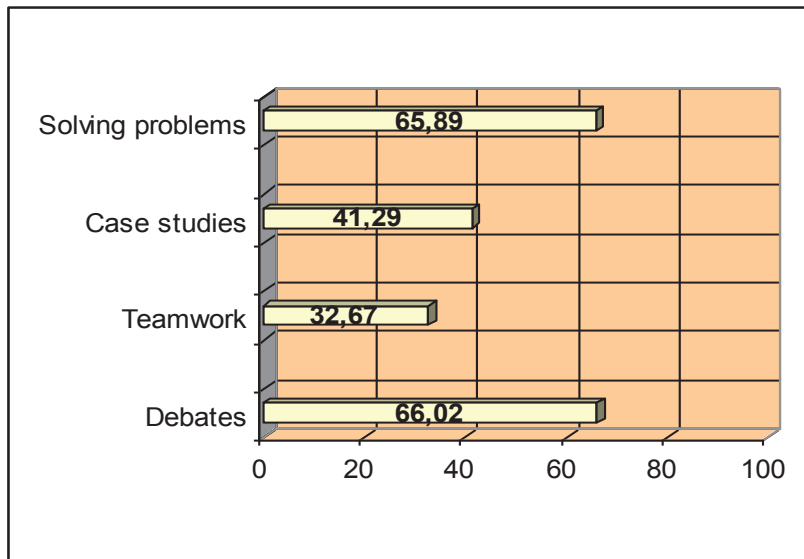


Figure 3: Teaching methods used during courses and seminars in the Faculty of Economics

Source: Author conception

According to data presented in Figure 3, 66,02% of the analyzed disciplines focus on lecture and only 32,67% are using teamwork activities. In other words, courses and seminars are concerned with transmitting the information and not with highlighting how knowledge is applied. Despite all these, 65,89% of the disciplines are preoccupied with solving problems and discussions, and 41,29% have case studies.

So, the teaching methods used in courses and seminars facilitate the creation and disseminations of explicit knowledge without taking into consideration the tacit ones.

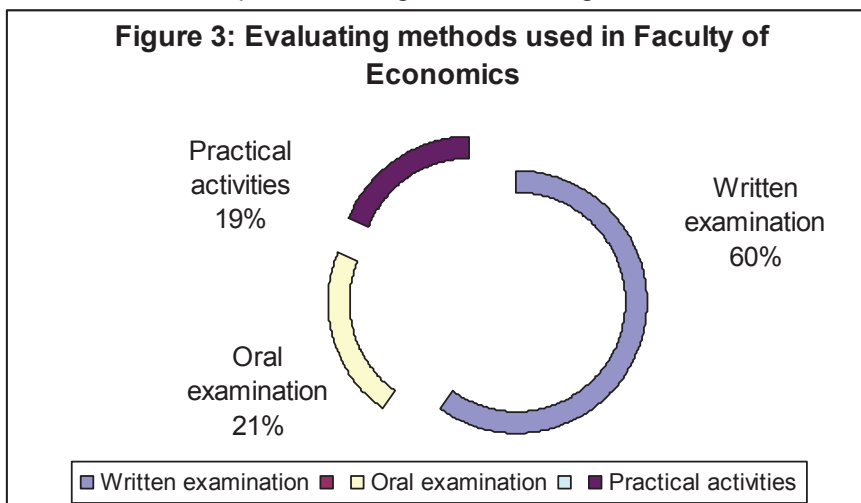


Figure 4: Assessment methods used in the Faculty of Economics Science

Source: Author conception

The strongest orientation towards the creation of explicit knowledge is emphasized in Figure 4. So, for 60% of the examined disciplines the importance of written tests is higher than 50% in final grade. These tests capture only the explicit knowledge acquired during the courses and seminars activities and don't take into consideration the skills, abilities and competences that students had developed during their studies. Only for 19% of the courses, the practical activities have a share greater than 21% refer to oral examination.

Comparing the "real" and the "ideal" profile of the future knowledge worker it reveals that graduates from the Faculty of Economic Science from "Lucian Blaga" University of Sibiu have at least 50% of the ideal knowledge worker characteristics, no matter the field in which they are specialized in.

The most important skills that are defining a knowledge worker are the same with the ones that any company needs from its employees. So, the economic higher education should focus on creating and developing learning skills, technology skills, problem – solving skills, teamwork skills, communication skills and critical thinking.

6. In conclusion

In conclusion we can say that the higher education institutions tend to be oriented only on meeting the first condition of creating a knowledge worker – which refers to creating general and specialized knowledge. In other words, it contributes to the creation of the future knowledge worker but is not creating the ideal employee that any company needs and looks for it.

Conclusions showed that the courses taught to the undergraduates' level are not oriented towards teamwork, communication, and use of information technologies. As a consequence, the graduates will not be able to respond efficiently to knowledge economy challenges and will represent a vulnerability for the organization because they will be "one step behind" what's happening on the market.

Based on these findings, it can be sustain that the disciplines taught during the undergraduate studies should be derected towards the development of communication skills, teamwork and using of ICT. These may be achieved by studies and projects on which teams must be involved.

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