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# The Future Knowledge Worker: An Intercultural Perspective

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***Abstract.*** *The paper aims to provide empirical evidence regarding the influence of cultural specificity on the capacity of the European higher education institutions of developing the future knowledge workers. Therefore, an exploratory research is employed and the qualitative approach is combined with the qualitative one. The focus is on the European business faculties since they are the main provider of the advanced economies workforce. 24 units of analysis are selected based on five criteria: university's number of students, research level, experience on the market, presence on QS Worlds University Ranking, position occupied in national ranking and access to information; for each of them, a content analysis is applied. Then, a logistic regression analysis is employed in order to determine whether cultural dimensions (independent variables) influence the use of a specific teaching activity, the development of certain skills and faculties' capacity of developing the future knowledge workers (dependent variables). The results show that power distance and uncertainty avoidance may decrease the odds of developing the future European knowledge worker while the long term orientation may increase these odds. All five clasical dimensions of Hofstede influence the development of graduates' skills but only four of them have an impact on the teaching and evaluating activities, namely: power distance, individualism, masculinity and uncertainty avoidance; the second one influences academics' attitude towards increasing the use of practical activities within the courses while the other ones have an impact on the theoretical activities.*

***Keywords****: knowledge worker, power distance, masculinity/femininity, individualism/colectivism, long term orientation, uncertainty avoidance, higher education isntitutions.*

## Introduction

Recent studies state that "knowledge workers" (Drucker, 1959) represent more than a quarter of the advanced economies workforce (Edgar, Geare, & O'Kane, 2015; Hernaus & Mikulić, 2014; Roberts, 2007). They share common interests on various features (Li, Yung & Chang, 2015) and are essential for organizational success and sustained economic growth (Frank, Finnegan, & Taylor, 2004). Although some researchers (Darchen & Tremblay, 2010; Englmaier, Muehlheusser & Roider, 2014; Frenkel, Bendit & Kaplan, 2013a,b; Kogovsek & Kogovsek, 2013; Li et al., 2015) try to

identify the factors that facilitate their development, their analysis focus on the work environment; in other words they concentrate on the mature stage of their development (when the knowledge worker is already active on the labour market and focus on improving his/her skills and abilities) and neglect the initial stage (when his/her skills and abilities are starting to develop or are fostered). However, some attempts are made by Bosetti and Walker (2010), Dunne, Bennett, and Carre (1997) but they mainly focus on educational process and system and ignore their outcomes. In this circumstances, it can be stated that there is a lack of research regarding the creation or the initial development of the knowledge workers.

In the initial processes of creation and development of knowledge workers, the higher education institutions play a crucial role since they produce people with knowledge and skills, and generate new knowledge (Bosetti & Walker, 2010). Being conscious of their place in the system, the European higher education institutions are trying to adapt to market demands and to provide the necessary qualified human resources without taking into account the high level of internationalization and the influence of the cultural specificity in both the academic process (teaching and evaluating students' activity) and academic results (graduates' skills and competences). They aim to develop the future knowledge workers who will be capable of actively contributing to a smart, sustainable and innovative economy but they still have problems of detaching themselves from the traditional view of the educational system. In other words, they tend to provide specialists who know how to do their job and keep in touch with what is happening in the environment but they are incapable of sharing their knowledge, taking risks and managing their time efficiently (Leon, 2014). This situation may appear due to cultural specificity which makes the difference between good and bad, acceptable and unacceptable, it dictates individuals thoughts, beliefs and behaviours, and at the same time, it justifies individuals' and institutional actions. However, the influence of the cultural specificity on the educational institutions and on the development of the future knowledge workers is neglected by the researchers from both fields: knowledge management and educational system.

Taking these into account, this paper aims to provide empirical evidence regarding the influence of the cultural specificity on the capacity of the European business administration faculties of facilitating the development of the future knowledge workers. Thus, in the following section, the relationship between knowledge workers, higher education institutions and national culture is presented. Then, in the third part of the article, the main particularities of the research design are emphasized while the forth section summarize the results obtained after analysing the situation registered

among the European higher education institutions. Last but not least, the article closes by emphasizing the theoretical and practical implications of this research and by indicating some directions for further research.

## From knowledge workers to cultural specificity

Davenport (2005) defines knowledge workers as the people with a high degree of education or expertise whose work primarily involves the creation, distribution, or application of knowledge while Abbasi, Belhadjali and Hollman (2009) present them as those employees who add value to the organization because of what they know. According to Brinkley (2006), knowledge workers are those who (i) work in the top three standard occupational classifications such as managers, professionals, associate professionals, (ii) have high level skills, certified by a degree or equivalent qualifications, and (iii) perform tasks that require expert thinking and complex communication skills with the assistance of computers. Following the same line but focusing on a more specific area, Salem and Yusof (2013, p.619) define knowledge workers as "those involved directly and indirectly in the technical development and deployment of biotechnology products and services. They have tertiary education and/or industry experience". These definitions manage to link the concept of "knowledge worker" with the purpose of the higher education institutions.

The link between the two of them is fostered by main skills and abilities of a knowledge worker which are presented in Table 1. These not only highlight the ideal portrait of knowledge worker but it can also serve as a lead for the higher education institutions; they emphasize the direction in which the academic efforts should be directed in order to increase educational efficiency and to provide the workforce that the current economy needs. In other words, they bring forward the skills and abilities expected by the employers from the graduate of an economics and business administration faculty.

Nevertheless, their development and also the approach adopted in the educational process is influenced by the cultural specificity since national culture is "a pattern characterized by shared beliefs, attitudes, norms, roles and values that are organized around a theme and that can be found in certain geographic regions during a particular historic period" (Triandis, 1995, p.43). This defines what is generally accepted in a society, what is good and what is wrong, what is valued and what is criticized. The main components under which the influence of national culture is manifested were analysed through various models among which it can be mentioned

the work of: Kluckhohn and Strodbeck (1961), Hofstede (2001), Hall (1981), Hall and Hall (1990), Trompenaars (1993), Schwartz (1992, 1994), and House, Hanges, Javidan, Dorfman, and Gupta (2004). However, the core cultural dimensions that are frequently are considered to be those described by Hofstede (2001), namely: power distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, and long term orientation.

***Table 1. The main skills and abilities of the knowledge worker (Leon, 2011, pp.212-213)***

| Author/-s (Year) | Skills and abilities |
|---|---|
| Dunne et al. (1997) | • Communication skills;<br>• Study skills;<br>• Problem-solving skills;<br>• Political and economic literacy;<br>• Using ICTs;<br>• Networking;<br>• Coping with uncertainty. |
| Hargreaves (1999) | • Flexibility;<br>• Networking;<br>• Creativity;<br>• Learning skills. |
| Jenks (2004) | • Critical thinking;<br>• Creativity;<br>• Sensitivity;<br>• Respect;<br>• Appreciation of other points of view. |
| Johnson (2006) | • Technology skills;<br>• Information problem-solving skills;<br>• Higher-order thinking skills. |
| Lindberg (2008) | • Risk-taking skills;<br>• Teamwork skills;<br>• Flexibility;<br>• Strategic analysis. |
| Uluorta and Quill (2009) | • Flexibility;<br>• Risk-taking skills;<br>• Using ICTs;<br>• Innovation;<br>• Learning skills. |
| Sahlberg and Boce (2010) | • Broad cognitive learning;<br>• Communication and collaborative skills;<br>• Risk-taking skills;<br>• Creativity;<br>• Innovation. |
| Leon (2011) | • Learning skills; |

| | |
|---|---|
| | • Technology skills;<br>• Problem-solving skills;<br>• Teamwork skills;<br>• Communication skills;<br>• Risk-taking skills;<br>• Critical thinking. |
| Maruta (2012) | • Problem-solving skills;<br>• Communication skills;<br>• Innovation and autonomy;<br>• ICTs skills. |

*Power distance* reflects the extent to which people accept and even expect for power and authority to be owned by a small number of members which exert considerable control over others (Hofstede, 2001). In the societies with a high level of power distance, the members who have the power are accustom to use their privileges and to control everything; their subordinates do what they are told without questioning; the focus is on who is in charge; formal authority and power go hand in hand. In the societies with a low level of power distance, the power is owned by a large number of members and the decisions are taken after a couple of rounds of consultations; subordinates expect to be involved in decision-making; the focus is on who is the best; informal authority and power go hand in hand. From the educational system approach, this will affect the academic process in terms of goals and activities. In the case of the societies with a high level of power distance, the teacher will have the authority and will expect for the students to recognize and accept it. Therefore, students will learn how subordinate and listen; the focus will be on accepting others' opinions and acquiring knowledge. On the other hand, in a society with a low level of authority the relationship between teacher and student is based on communication and cooperation; the students learn to be preoccupied by their own development, to communicate and to adapt to various circumstances.

*Individualism/Collectivism* reflects around who the society is organized: personal or group interests. The members of an individualistic culture are motivated by the idea of being independent, consider that their interests are more important than others, require low hierarchical governance, prefer abstract and analytical reasoning, excel in creating explicit knowledge and admire individual achievement (Samochowiec & Florack, 2010). As a consequence, in this case, the academic process focuses on using analytical techniques and developing students' capacity of reasoning, analysing and augmenting. Besides, at the end of the course, students will focus on being responsible for him-/herself, making their life by themselves, and reaping the rewards of their endeavours. On the other hand, the members of a

collectivist culture are motivated by the idea of being part of a group, focus on developing relationships, require highly hierarchical governance, value knowledge that is historically and contextually grounded, and excel in understanding complex, tacit and systematic knowledge. In this circumstances, at the end of the course, students will be oriented towards looking for others' support, being part of a group and exchanging unconditioned loyalty.

*Masculinity/Femininity* reflects the extent to which the society encourages achievement or the quality of life (Hofstede, 2001). In a masculine culture, the focus is on assertiveness, success, material possession, proactivity and control of the environment. In this circumstances, the academic process will focus on encouraging students to establish and achieve various goals, to compete, to accept changes, to solve problems by direct confrontation and innovations, to gain performance-based rewards. In a feminine culture, modesty, relationships and quality of life are emphasized; reactivity and living in harmony with the environment are the most valued coordinates. As a consequence, at the end of the courses, the graduates are expected to value relationships, social progress and the welfare of others, to solve problems by negotiation, to be sceptical to changes and to prefer intrinsic rewards.

*Uncertainty avoidance* influences not only the process of knowledge sharing on which the academic process is based on but also the development of the future knowledge workers. In a culture that accepts mistakes and uncertainty, and perceives them as learning situation, people are open to new experiences without being afraid of failing or being criticized. They will be able to recognize their mistakes in front of others, will be tolerant, will share their experiences (good or bad) and what they learned without being ashamed. If this type of behaviour is encouraged within the academic course then, at the end of it, students will be open to share their knowledge others, will not rush to judge others and will be able to learn something new from the life experience of anyone. At the other extreme, in a culture that rejects uncertainty, does not tolerate mistakes, and pretends that everyone has to be and to do everything perfect, people are more cautious with what they do and with whom they are sharing their experiences (Samochowiec & Florack, 2010). They will assume that everything that goes beyond the general accepted standards is failure and they will be ashamed of it. Even if they trust their colleagues, they will never admit that they were wrong and will never be tolerant. If this type of behaviour is encouraged in class then, at the end of it, the graduates will be open to share just a limited part of their knowledge and they will be oriented towards classifying and using stereotypes; they will focus only on the good experiences, the situations on

which they were the winners because they will assume that the lessons from which someone else can learn are only those related to success.

*Long term orientation* brings forward culture's perspective on time issues. The long term oriented culture focus on the future and are capable of dedicating themselves for a cause that will generate future benefits. As a results, through the academic process, hard work is encouraged, and students are motivated to anticipate the future, the estimate chances and to plan their activity and their life. On the other hand, the short term oriented cultures value the past and the present, and are scared by the future. Therefore, the graduates will be encouraged to live the moment and to act based on the "here and now" principle.

All these determine individuals' habits, inform them how to behave in certain situation, and affect the processes of knowledge creation, codification, dissemination and storing. As a consequence, they influence the development of the future knowledge worker from two different directions. On the one hand, the national characteristics are reflected in students' beliefs, values and behaviour; affects their perception on what is good and bad, correct or wrong, acceptable or unacceptable. On the other hand, they influence academics' behaviour and perspective on the academic process; due to their orientation towards collectivism or individualism, they will organize their courses around teams or individual tasks. However, there is a lack of studies in this area; the influence of intercultural specificity appears more appealing to the business area than to the educational one, to the researchers from strategic management than to those from knowledge management field. Starting from these assumptions, this paper aims to provide empirical evidence regarding the influence of the cultural specificity on the development of the future knowledge workers.

## Filling the gap between knowledge workers development and cultural specificity. A research methodology

The paper aims to provide empirical evidence regarding the influence of the cultural specificity on the capacity of the European business administration faculties of facilitating the development of the future knowledge workers.

In order to achieve this goal, the following objectives are aimed: (i) to determine the characteristics of the future knowledge workers, from the perspective of the most important European business higher education institutions; (ii) to analyse the syllabuses of the common courses that are taught at the undergraduate level in the economics and business

administration faculties from the European Union member states; and (iii) to determine the influence that the cultural dimensions may have on the development of the future knowledge workers.

An exploratory research was developed within a case study research strategy. The focus was on the faculties of economics and business administration from the European Union member states due to the fact that the European policies aim to increase the employment rate up to 75% by 2020 and the graduates of the business fulties are going to work in the most dynamic economic sectors, namely: banking, commerce, business administration, tourism etc. The units of analysis were selected based on five criteria: university's number of students, research level, experience on the market, presence on QS Worlds University Ranking, position occupied in national ranking and access to information (Table 2). The selection presents only 24 European Union member states since Cyprus, Luxemburg, Malta and Slovakia did not manage to meet all the selection criteria (Leon, 2014).

***Table 2. The main criteria included in the process of selecting the units of analysis (Leon, 2014, p.316)***

| Criterion | Target level | Number of units |
|---|---|---|
| Presence in the QS World University Ranking | Present | 293 |
| Number of students | > 12 000 | 226 |
| Research level | High | 185 |
| Experience on the market | > 25 years | 182 |
| Position occupied in national ranking | First | 24 |
| Access to information | Syllabus in English | 21 |

Then, the web pages of the selected faculties were analyzed and 267 syllabuses were collected. A content analysis was applied o each of them where the units of analysis were represented by the educacional goals, the practical assignments, and the teaching and evaluating methods.

Regarding cultural specificity, the classical Hostede model was used which oncentrates on 5 dimensions, namely: distance power, individualism/colectivism, masculinity/feminism, uncertainty avoidance, and long term orientation. The information regarding the score obtained by each country on these dimensions was collected from the official webpage of The Itim International Hofstede Centre.

The collected data were processed using SPSS Program and were subject of the logistic regression analysis. This was chosen due to its robust character and its ability to explain the relationship between a dependent (nominal or

non-metric) variable and more independent (nominal, categorical, continous) variables (Hair, Black, Babin, Anderson & Tatham, 2006; Hosmer & Lemeshow, 2000). Therefore, it was applied in order to determine whether cultural dimensions (independent variables) influence the use of a specific teaching activity, the development of certain skills and faculties' capacity of developing the future knowledge workers (dependent variables).

The dependent and independent variables were codded as dummy variables were „1" – represented the use of teaching method / development of skill / capacity of deveoping the future knowledge worker, whereas „0" – simbolized the absence of it. Given the fact that the cultural dimensions are bivariate, „1" was used for the situations describing a high score and „0" for the cases presenting a low score. Last but not least, it was assumed that a faculty has the capacity of developing the future knowledge worker if it develops at least half of the necessary skills and abilities (Table 3).

***Table 3. The main skills and abilities of the future knowledge workers (Leon, 2014, p.317)***

| Skills and abilities | References |
|---|---|
| Specialized knowledge | Dunne et al. (1997), Guo, Xiao, and Yang (2012), Leon (2011) |
| Learning skills | Dunne et al. (1997), Hargreaves (1999), Leon (2011), Mladkova (2015), Sahlberg and Boce (2010), Uluorta and Quill (2009) |
| Analysis and synthesis capacity | Jenks (2004), Johnson (2006), Leon (2011) |
| Problem-solving skills | Dunne et al. (1997), Hendarman and Tjakraatmadja (2012), Johnson (2006), Leon (2011), Mladkova (2015) |
| Time management skills | Leon (2011), Sahlberg and Boce (2010), Uluorta and Quill (2009) |
| Written communication skills | Dunne et al. (1997), Leon (2011), Sahlberg and Boce (2010) |
| Oral communication skills | Dunne et al. (1997), Leon (2011), Sahlberg and Boce (2010) |
| Teamwork skills | Jenks (2004), Leon (2011), Lindberg (2008), Sahlberg and Boce (2010) |
| Risk-taking skills | Dunne et al. (1997), Johnson (2006), Leon (2011), Lindberg (2008), Mladkova (2015), Sahlberg and Boce (2010), Uluorta and Quill (2009) |

| | |
|---|---|
| ICT skills | Dunne et al. (1997), Johnson (2006), Leon (2011), Mansi and Levy (2013), Rozewski, Jankowski, Brodka, and Michalski, (2015), Uluorta and Quill (2009) |

The results of these analysis and their implications are presented in the following sections of this article.

## A portrait of the future European knowledge workers, starting from the cultural dimensions

The European higher education institutions are trying to adapt to market demands and to provide the necessary qualified human resources but they neglect the impact of the national culture dimensions. The influence that these have of the process of developing the future knowledge worker is highlighted further based on the results generated by the logistic regression (Table 4). Since the Omnibus test offers a positive result (the Chi-Square value for 5 degrees of freedom and a probability of 0.066 is 10.336, higher than the theoretical Chi-Square which equals 10.31), just like the Hosmer-Lemesow test (which provides a level of significance higher than 0.05), the null hypothesis is rejected. Therefore, adding the cultural dimensions into the model increases the ability to predict the development of the future European knowledge workers.

***Table 4. Testing the influence of the cultural dimension on the future knowledge workers development***

| | | | **Chi-square** | **df** | **Sig.** |
|---|---|---|---|---|---|
| Omnibus test | Step 1 | Step | 10.336 | 5 | 0.066 |
| | | Block | 10.336 | 5 | 0.066 |
| | | Model | 10.336 | 5 | 0.066 |
| Hosmer-Lemeshow Test | | | 8.377 | 7 | 0.300 |

In fact, 54% of the variance of the dependent variable (the development of the future knowledge workers in the European business faculties) can be explained by the cultural dimensions that characterize the national context in which the higher education institutions are established (Table 5). In other words, the changes that appear among cultural dimensions can justify 54% of the transformations registered at the educational level, in terms of developing among students the skills and abilities that characterize the knowledge workers.

***Table 5. Determining the influence of the cultural dimensions on the development of the future European knowledge workers***

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 17.189[a] | 0.404 | 0.540 |

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than 0.001

The influence that each cultural dimension has in the development of the future European knowledge worker is emphasized in Table 6. This reflects the contribution that each of them has when all the other predictors remain constant. Thus, if a 0.05 criterion of statistical significance is established, the development of the future European knowledge workers becomes a function of 3 cultural dimensions, namely: power distance, uncertainty avoidance and long term orientation. As a consequence, it can be assumed that in the European economic and business administration faculties:
- an increase with one unit of the *power distance* will 4.545 decrease in log-odds of developing the future European knowledge workers.
- an increase with one unit of the *uncertainty avoidance* will decrease the log-odds of developing the future European knowledge workers by 5.195 times.
- an increase with one unit of the *long term orientation* will 3.068 increase the log-odds of developing the future European knowledge workers.

***Table 6. The influence that each cultural dimension exercise on the development of the future European knowledge workers***

| | Cultural dimensions | B | S.E. | Wald | df | Sig | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 1[a] | *Power distance* | *-4.545* | *1.941* | *5.485* | *1* | *0.019* | *94.185* |
| | Individualism | 1.522 | 1.843 | 0.682 | 1 | 0.409 | 4.582 |
| | Masculinity | -1.636 | 1.598 | 1.048 | 1 | 0.306 | 0.195 |
| | *Uncertainty Avoidance* | *-5.195* | *2.760* | *3.543* | *1* | *0.046* | *0.006* |
| | *Long term orientation* | *3.068* | *1.782* | *2.965* | *1* | *0.085* | *21.495* |
| | Constant | -0.704 | 2.268 | 0.096 | 1 | 0.756 | 0.494 |

a. Variable(s) entered on step 1: power distance, individualism, masculinity, uncertainty avoidance, long term orientation.

Going further with the analysis, it can be noticed that the cultural dimensions promoted, more or less consciously, within the academic environment influence the development of the learning skills, communication skills, estimating capacity and ICT skills (Table 7). If a 0.05 criterion of statistical significance is established, their development is influenced by: power distance, individualism, masculinity, uncertainty avoidance and long term orientation. Therefore, it can be stated that in the economic and business administration faculties from the European Union member states:

- an increase with one unit of the *power distance* will decrease the log-odds of developing students' estimating capacity and ICT skills by 0.896, respectively 0.764.
- an increase with one unit of the *individualism* level will increase by 1.429 the log-odds of developing students' written communication skills and by 1.260 the log-odds of developing oral communication skills.
- an increase with one unit of the *masculinity* will decrease by 0.694 the odds of developing students' oral communication skills.
- an increase with one unit of the *uncertainty avoidance* level will generate a 0.922 increase in the log-odds of developing students' ICT skills and a 0.673 increase in the log-odds of developing students' estimating capacity.
- an increase with one unit of the *long term orientation* will determine the decrease in log-odds of developing students' written (with 1.224) and oral (with 0.954) communication skills. At the same time, will generate an increase in log-odds of developing students' learning skills (with 0.908) and ICT skills (with 0.683).

***Table 7. The influence of the cultural dimensions on the development of the main skills of the future European knowledge workers***

| Step 1[a] | **Cultural dimensions** | **B** | **S.E.** | **Wald** | **df** | **Sig** | **Exp(B)** |
|---|---|---|---|---|---|---|---|
| Learning skills | Power distance | 0.301 | 0.402 | 0.560 | 1 | 0.454 | 1.351 |
| | Individualism | -0.290 | 0.425 | 0.463 | 1 | 0.496 | 0.749 |
| | Masculinity | 0.495 | 0.334 | 2.192 | 1 | 0.139 | 1.640 |
| | Uncertainty Avoidance | -20.982 | 6874.311 | 0.000 | 1 | 0.998 | 0.000 |
| | *Long term orientation* | *0.908* | *0.403* | *5.064* | *1* | *0.024* | *2.470* |
| | Constant | 21.097 | 6874.311 | 0.000 | 1 | 0.998 | 1.453 |
| Written communication skills | Power distance | 0.544 | 0.367 | 2.195 | 1 | 0.138 | 1.723 |
| | *Individualism* | *1.429* | *0.429* | *11.122* | *1* | *0.001* | *4.176* |
| | Masculinity | -0.429 | 0.296 | 2.101 | 1 | 0.147 | 0.651 |
| | Uncertainty Avoidance | 0.520 | 0.570 | 0.833 | 1 | 0.362 | 1.681 |
| | *Long term orientation* | *-1.224* | *0.401* | *9.315* | *1* | *0.002* | *0.294* |
| | Constant | -1.428 | 0.538 | 7.035 | 1 | 0.008 | 0.240 |
| Oral communication skills | Power distance | 0.485 | 0.364 | 1.770 | 1 | 0.183 | 1.624 |
| | *Individualism* | *1.260* | *0.411* | *9.379* | *1* | *0.002* | *3.524* |
| | *Masculinity* | *-0.694* | *0.294* | *5.557* | *1* | *0.018* | *0.500* |
| | Uncertainty Avoidance | 0.141 | 0.548 | 0.066 | 1 | 0.797 | 1.151 |
| | *Long term orientation* | *-0.954* | *0.379* | *6.348* | *1* | *0.012* | *0.385* |
| | Constant | -0.873 | 0.520 | 2.812 | 1 | 0.094 | 0.418 |
| Estimating capacity | *Power distance* | *-0.896* | *0.359* | *6.216* | *1* | *0.013* | *0.408* |
| | Individualism | -0.610 | 0.387 | 2.483 | 1 | 0.115 | 0.543 |
| | Masculinity | -0.082 | 0.279 | 0.086 | 1 | 0.769 | 0.921 |
| | *Uncertainty Avoidance* | *0.673* | *0.510* | *1.743* | *1* | *0.018* | *1.961* |
| | Long term orientation | -0.364 | 0.346 | 1.108 | 1 | 0.293 | 0.695 |
| | Constant | 0.292 | 0.505 | 0.335 | 1 | 0.563 | 1.339 |
| ICT skills | *Power distance* | *-0.764* | *0.345* | *4.901* | *1* | *0.027* | *0.466* |
| | Individualism | -0.261 | 0.376 | 0.479 | 1 | 0.489 | 0.771 |
| | Masculinity | -0.023 | 0.278 | 0.007 | 1 | 0.934 | 0.977 |
| | *Uncertainty Avoidance* | *0.922* | *0.507* | *3.307* | *1* | *0.039* | *2.514* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | *Long term orientation* | *0.683* | *0.345* | *3.926* | *1* | *0.048* | *0.505* |
| | Constant | 0.458 | 0.490 | 0.873 | 1 | 0.350 | 1.581 |

a. Variable(s) entered on step 1: power distance, individualism, masculinity, uncertainty avoidance, long term orientation.

Las but not least, the teaching and evaluating activities are also a subject of the cultural dimensions influence. According to data presented Table 8, if a 0.05 criterion of statistical significance is established, it can be claimed that the log-odds of using theoretical activities within the courses will increase with 3.280 times (if masculinity increases with one unit), with 3.232 times (if uncertainty avoidance is augmented with one unit), and with 0.584 times (if the level of power distance is increased with one unit). On the other hand, the individualism is the national cultural dimension that is capable of decreasing the log-odds of using predominantly practical activities; if the level of individualism increases with one unit then the probability of using predominantly practical activities with the academic courses decrease with 1.168.

Synthesizing, it can be claimed that the cultural specificity influences the development of the future European knowledge workers from the economic field. Its impact is so far twofold; on the one hand it has a direct impact on students' skills and on the other hand it interferes in academics' choice for the teaching and evaluating activities.

***Table 8. Determining the influence of the cultural dimensions on teaching and evaluating activities***

| Step 1[a] | **Cultural dimensions** | **B** | **S.E.** | **Wald** | **df** | **Sig** | **Exp(B)** |
|---|---|---|---|---|---|---|---|
| Theoretical activities | *Power distance* | *0.584* | *0.942* | *0.384* | *1* | *0.035* | *0.558* |
| | Individualism | -0.503 | 0.936 | 0.289 | 1 | 0.591 | 0.605 |
| | *Masculinity* | *3.280* | *1.268* | *6.697* | *1* | *0.010* | *26.581* |
| | *Uncertainty Avoidance* | *3.232* | *1.425* | *5.142* | *1* | *0.023* | *25.321* |
| | Long term orientation | -2.327 | 1.262 | 3.403 | 1 | 0.065 | 0.098 |
| | Constant | 1.988 | 1.133 | 3.077 | 1 | 0.079 | 7.301 |
| Practical activities | Power distance | -0.565 | 0.355 | 2.537 | 1 | 0.111 | 0.568 |
| | *Individualism* | *-1.168* | *0.395* | *8.729* | *1* | *0.003* | *0.311* |
| | Masculinity | -0.134 | 0.279 | 0.232 | 1 | 0.630 | 0.874 |
| | Uncertainty Avoidance | -0.356 | 0.505 | 0.496 | 1 | 0.481 | 0.701 |
| | Long term orientation | 0.465 | 0.352 | 1.742 | 1 | 0.187 | 1.591 |
| | Constant | 0.982 | 0.500 | 3.853 | 1 | 0.050 | 2.670 |

a. Variable(s) entered on step 1: power distance, individualism, masculinity, uncertainty avoidance, long term orientation.

## Conclusions and further research directions

The development of the future European knowledge workers is influenced by three core cultural dimensions, namely: power distance, uncertainty avoidance and long term orientation. The first two of them have a strong influence on the use of theoretical activities during the academic courses increasing the odds with 0.584, in the case of power distance, and with 3.232, in the case of uncertainty avoidance. In other words, an increase in the level of power distance and/or uncertainty avoidance will determine the educators to focus more on theoretical aspects than on practical activities; the perspective will switch from developing skills and abilities to sharing explicit knowledge which becomes practically a safety nest.

In terms of skills, it has been noticed that the development of the learning skills is supported by the long term orientation; the need to be prepare for the future increases students' hunger for knowing what is happening in the environment and what may happen in the close and distant future. Besides, communication skills are fostered by individualism (which determines an increase in odds with 1.429 in the case of written communication and with 1.260 in the case of oral communication) and inhibited by masculinity (which generates a decrease of the odds with 0.694 in the case of oral communication) and long term orientation (which determines a 1.224 decrease in odds in case of written communication and 0.954 in case of oral communication). Last but not least, the estimating capacity is influenced by power distance and uncertainty avoidance (the first one decreases the odds with 0.896 while the second one generate a 0.673 increase in the odds) while the ICTs skills are subject of the power distance, uncertainty avoidance and long term orientation (the first one determines a 0.764 decrease in the odds while the last two increase them with 0.922, respectively 0.683).

The results are limited by the fact that the analysis concentrated only on the best higher education institutions from the European Union member states, according to QS World University Rankings. There may be other business faculties that for one reason or another did manage to enter into the world ranking developed by Quacquarelli Symonds but they are good at developing future knowledge workers. On the other hand, the research only focused on the economics and business administration faculties when knowledge workers may be developed in other fields too.

Despite these limits, the research has both theoretical and practical implications. On the one hand, it extends the theory from the knowledge management field by emphasizing the factors that influence the development of the future knowledge workers. The studies developed so

far, take for granted the development of the knowledge workers and neglect the influence of the educational system and cultural specificity on the process. On the other hand, it creates a bridge between three social sciences: knowledge management, intercultural management and pedagogy. At this level, it emphasizes the causal effect that exists between two complex external factors (cultural dimensions, market demands) and the academic process. It seems that, due to the cultural specificity, some faculties are more oriented to adapt to market's demands and develop future knowledge workers while others remain faithful to the traditional school of thinking; the last ones may be afraid that changing their curricula or focusing more on tacit knowledge than on explicit knowledge may transform them into a vocational school.

All these elements create the conceptual framework for some further researches which may concentrate on offering an answer to the following questions:
1. Which cultures are more oriented to developing future knowledge workers and how are they reacting to the brain-drain phenomenon?
2. What are the real skills and abilities that students obtain during their bachelor studies?
3. Are there any differences between the skills on which the teachers focus on and the ones students develop during the course? If so, which cultures are predisposed to register a higher difference?

## References

Abbasi, S.M., Belhadjali, M., and Hollman, K.W. (2009). Managing knowledge workers for sustaining competitive advantage. *Competition Forum*, 7(2), 367-370.

Bosetti, L., and Walker, K. (2010). Perspectives of UK Vice-Chancelors on Leading Universities in a knowledge-based economy. *Higher Education Quarterly*, 64(1), 4-21.

Brinkley, I. (2006). *Defining the Knowledge Economy. Knowledge Economy Programme Report*. London: The Work Foundation.

Darchen, S., and Tremblay, D.-G. (2010). What attracts and retains knowledge workers/students: The quality of place or career opportunities? The case of Montreal and Ottawa. *Cities*, 27(4), 225-233.

Davenport, T.H. (2005). *Thinking for a living. How to get better performance and results from knowledge workers*. Boston, MA: Harvard Business School Press.

Drucker, P. (1959). *Landmarks of tomorrow: A report on the new "post-modern" world*. New York, NY: Harper Colophon Books.

Dunne, E., Bennett, N., and Carre, C. (1997). Higher education: core skills in learning society. *Journal of Education Policy*, 12(6), 511-525.

Edgar, F., Geare, A., and O'Kane, P. (2015). The changing dynamic of leading knowledge workers: The importance of skilled front-line managers. *Employee Relations*, 37(4), 487-503.

Englmaier, F., Muehlheusser, G., and Roider, A. (2014). Optimal incentive contracts for knowledge workers. *European Economic Review*, 67(1), 82-106.

Frank, F.D., Finnegan, R.P., and Taylor, C.R. (2004). The race for talent: retaining and engaging workers in the 21st century. *Human Resources Planning*, 27(3), 12-25.

Frenkel, A., Bendit, E., and Kaplan, S. (2013a). The linkage between the lifestyle of knowledge-workers and their intra-metropolitan residential choice: A clustering approach based on self-organizing maps. *Computers, Environment and Urban Systems*, 39(1), 151-161.

Frenkel, A., Bendit, E., and Kaplan, S. (2013b). Residential location choice of knowledge-workers: The role of amenities, workplace and lifestyle. *Cities*, 35(1), 33-41.

Guo, W., Xiao, H., and Yang, X. (2012). An empirical research on the correlation between human capital and career success of knowledge workers in enterprise. *Physics Procedia*, 25(1), 715-725.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and Tatham, R.L. (2006). *Multivariate Data Analysis* (6th edition). New Jersey: Prentice-Hall.

Hall, E.T. (1981). *The Sillent Language*. New York: Doubleday.

Hall, E.T., and Hall, M.R. (1990). *Understanding cultural differences*. Yarmouth, Maine: Intercultural Press.

Hargreaves, D.H. (1999). The knowledge-creating school. *British Journal of Educational Studies*, 47(2), 122-144.

Hendarman, A.F., and Tjakraatmadja, J.H. (2012). Relationships among soft skills, hard skills, and innovativeness of knowledge workers in the knowledge economy era. *Procedia – Social and Behavioral Sciences*, 52(1), 35-44.

Hernaus, T., and Mikulić, J. (2014). Work characteristics and work performance of knowledge workers. *EuroMed Journal of Business*, 9(3), 268-292.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage Publications.

Hosmer, D., and Lemeshow, S. (2000). *Applied Logistic Regression* (2nd edition). New York: John Wiley.

House, R.J., Hanges, P.J., Javidan, M, Dorfman, P.W., and Gupta, V. (2004). *Culture, Leadership and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage Publications.

Jenks, C.L. (2004). Missing links in the public school curriculum: four dimensions for change. *World Futures*, 60(3), 195-216.

Johnson, D. (2006). Skills for the knowledge worker. *Teacher Librarian*, 34(1), 8-13.

Kluckhohn, F., and Strodbeck, F. (1961). *Variations in Value Orientations*. Evanston, IL: Row, Peterson.

Kogovsek, M., and Kogovsek, M. (2013). Retaining mature knowledge workers: the quest for human capital investments. *Procedia – Social and Behavioral Sciences*, 106(1), 2280-2288.

Leon, R.D. (2011). Creating the future knowledge worker. *Management & Marketing. Challenges for the knowledge society*, 6(2), 205-222.

Leon, R.D. (2014). University's contribution to the development of the future knowledge workers. In Uslu, F. (Ed.), *Proceedings of INTCESS14-International Conference on Education and Social Sciences* (pp.313-322). Istanbul: OCERINT.

Li, M.-L., Yung, D., and Chang, S.K. (2015). A formal model for intellectual relationships among knowledge workers and knowledge organizations. *Journal of Visual Languages and Computing*, 27(1), 1-8.

Lindberg, M.E. (2008). Higher Education-to-work Transitions in the Knowledge Society: The Initial Transition and Positional Competition Point of View. *Higher Education in Europe*, 33(4), 375-385.

Mansi, G., and Levy, Y. (2013). Do instant messaging interruptions help or hinder knowledge worker's task performance? *International Journal of Information Management*, 33(3), 591-596.

Maruta, R. (2012). Transforming knowledge workers into innovation workers to improve corporate productivity. *Knowledge-based Systems*, 30(1), 35-47.

Mladkova, L. (2015). Knowledge workers and the principles of 3S (Self-management, Self-organization, Self-control). *Procedia – Social and Behavioral Sciences*, 181(1), 178-184.

Roberts, J. (2007). *The modern firm: Organizational design for performance and growth*. Oxford: Oxford University Press.

Rozewski, P., Jankowski, J., Brodka, P., and Michalski, R. (2015). Knowledge workers' collaborative learning behaviour modelling in an organization social network. *Computers in Human Behavior*, 51(2), 1248-1260.

Sahlberg, P., and Boce, E. (2010). Are teachers teaching for a knowledge society? *Teachers and Teaching*, 16(1), 31-48.

Salem, N.B.B.S., and Yusof, N.A.M. (2013). Diagnosing organization systems model for knowledge workers development in Malaysian biotechnology industry. *Procedia – Social and Behavioral Science*, 81(1), 618-623.

Samochowiec, J., and Florack, A. (2010). Intercultural contact under uncertainty: The impact of predictability and anxiety on the willingness to interact with a member from an unknown cultural group. *International Journal of Intercultural Relations*, 34(5), 507-515.

Schwartz, S.H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp.1-65). Orlando, FL: Academic.

Schwartz, S.H. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H.C. Triandis, C. Kagitcibasi, S.C. Choi, and G. Yoon (Eds.), *Individualism and Collectivism: Theory, methods and applications* (pp.85-122). Thousand Oaks, CA: Sage Publications.

Triandis, H.C. (1995). *Individualism and Collectivism*. Boulder: Westview.

Trompenaars, F. (1993). *Riding the waves of culture: understanding cultural diversity in business*. London: Economics Books.

Uluorta, H., and Quill, L. (2009). In pursuit of the knowledge worker: educating for world risk society. *International Studies in Sociology of Education*, 19(1), 37-51.