A Comparative Approach of Cultural Intelligence Profile of Management and Non-Management Romanian Students

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Abstract
This paper discusses the results of a comparative research related to cultural intelligence (CQ) carried out for a sample of Romanian students of the same university from various fields of study. Cultural intelligence (CQ) is defined as the ability of individuals to act efficiently in different cultural contexts. Due to a significant growth of Internet-based communication, enabling virtual work teams, geographically and culturally dispersed (Stanko & Gibson, 2009), and to increased globalization over the past 20 years, the number of people who currently get in touch with other cultures has grown significantly (Eisenberg et al., 2013). In this context, it could be considered that developing cross-cultural competencies is useful, even necessary, for professionals in all fields, not only for current or future managers. Consequently, in order to better understand students' CQ, we classified them into two distinct groups, management and non-management students, using Earley & Ang's (2003) multidimensional concept as an analysis framework. Because CQ is a multidimensional concept, this paper will discuss the answers for each of the four CQ dimensions, in order to identify which of the four capabilities is more or less developed among students and which are the significant similarities and differences between the two groups of students. Taking into account that literature highlights the influence of cross-cultural management academic courses on CQ (Eisenberg et al. 2013, Putranto et al., 2015; Ramsey & Lorentz, 2016), our main purpose is to understand differences/similarities between the two groups and consequently, adapting the university curricula to students' real needs related to developing their CQ.

Keywords: Cultural intelligence, university students, Romania, higher education, cross-cultural courses.

JEL classification: M10, M14

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Introduction

Fundamental changes in labor market are taking place due to exponential growth of globalization, of business processes and markets internationalization, and of economy digitalization, as essential features of XXI century’s civilization. Consequently, there is an intensive international labor mobility (Templer et al., 2006), and a significant growth of Internet-based communication, that is enabling virtual work teams, both geographically and culturally dispersed (Stanko & Gibson, 2009).

These changes are generating a great challenge related to increased cultural diversity: for professionals, it is no longer enough only to possess technical knowledge, they need also the skills that makes them able to work effectively and efficiently in an increasingly cross-cultural work environment. It could be said that globalization is stimulating a growing demand for employees prepared to interacting effectively across cultures (Brancu et al., 2016). But this individual ability to interacting effectively in multiple cultures is not a skill possessed by all (Crowne, 2008). Some individuals are more successful than others in a cross-cultural business situation, due to having a higher CQ.

The concept of cultural intelligence (CQ) was developed in order to better understanding why some individuals are more effective than others in culturally diverse situations. It was developed by Earley & Ang (2003) and defined as „a person’s capability for successful adaptation to new cultural settings; that is, for unfamiliar settings attributable to cultural context“. This definition for CQ was developed and detailed in several subsequent studies (Peterson, 2004; Triandis, 2006; Van Dyne & Ang, 2007; Ang et al. 2007; Crowne, 2008; Ang & Van Dyne, 2008; Ward et al., 2009; Ang et al. 2012; Thomas et al. 2015; Ramsey and Lorentz, 2016; Alon et al., 2016). The essential guideline of these studies is that CQ is appropriate for describing the capability of individuals to use the right skills and abilities in unfamiliar and ambiguous environments. As a synthesis of the CQ definitions, it can be said that the greater the cultural intelligence of an individual is, the greater he or she will be able to handle efficiently various cultural contexts (Ang et al., 2007). The cooperation between higher education and business sectors leads to long term partnerships, supporting the development of both fields of activity (Nen, Stoika, Radulescu, 2011). In addition, the need to possess this type of intelligence is increasing in a more globalized world, because even when an individual is not working outside his or her home country, he/she will still might be in contact with customers, suppliers or business partners from other cultures (Crowne, 2008).

The origins of this concept are found in the cross-cultural management literature. Currently, the best known CQ model is the model proposed by Ang et al. 2007. They are describing CQ as a multidimensional concept, „targeted at situations involving cross-cultural interactions arising from differences in race, ethnicity and nationality” (Ang et al. 2007). CQ thus comprises four components, distinctive and however, inter-related : metacognitive (the individual ‘s ability to
learn about other cultures), cognitive (the individual’s ability to learn about how to learn about other cultures), motivational (the individual’s desire to interact across cultures) and behavioural (the individual’s ability to modify behavior to do so successfully).

First, metacognitive CQ is about the mental processes that individuals are using to acquire and understand cultural knowledge. It is about the individual’s level of conscious cultural awareness. It includes processes such as planning, monitoring and revising mental models of cultural norms for different countries or groups of people. It seems that the metacognitive factor has a positive effect on individual task performance in intercultural settings. The authors consider that people with high metacognitive CQ are able to question cultural assumptions and to adjust their mental models in intercultural situations. They are aware of others’ cultural preferences before and during interactions.

The second component, cognitive CQ refers to the knowledge about the norms, practices and conventions in different cultures, acquired from education and personal experiences. People with high cognitive CQ are knowing and understanding the economic, legal and social contexts of different cultures. They are also capable to build accurate expectations and interpretations of their cultural interactions.

The third component, motivational CQ reflects the capability to direct attention and efforts towards learning about, and functioning in situations characterized by cultural differences; it is an essential component of CQ, being the source of intercultural adapted actions. This is the main variable that is contributing the most to the expats’ success and leadership effectiveness (Chen et al., 2010).

Fourth component, behavioural CQ reflects the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures. Individuals with high behavioural CQ exhibit situationally appropriate behaviours based on their broad range of verbal and nonverbal capabilities.

In this paper, we will discuss the intercultural intelligence among management and non-management students in Romania. Our study represents a continuation of our earlier research, which was analyzing CQ only for students in management (Brancu et al., 2015). Since intercultural interactions are no longer a part of the activity just of business people, and more and more of several other professions (Alon et al., 2016), we considered useful to extend the CQ analysis to students from other fields of study. From this perspective, the present paper covers a gap in the literature, as far as most studies that are analyzing CQ are focused on national contexts and comparisons of several national contexts. The previous studies were carried out having as subjects (1) students of some national universities, without taking into account their field of study (Ang et al., 2007; Ward et al., 2011; Erez et al., 2013; Ming et al., 2013), (2) professional expats (Huff, 2013, Lin et al. 2012), (3) managers and management students (MacNab & Worthley, 2012; Ming et al., 2013), or (4) a particular profession, such as the military service (Sahin et al., 2014; Rockstuhl and al., 2011).
The empirical studies that are analyzing students' CQ are relatively recent and not very numerous. They are predominantly focused either on the presentation of a single national context (Putranto et al., 2015; Erez et al., 2013), either on the comparison of two national contexts (Ang et al., 2007), or on international students from universities (Ward et al., 2011, Ming et al., 2013). Meanwhile, students who represent the surveyed population are mostly business students (Ang et al., 2007; Putranto et al., 2015; Erez et al., 2013) or, the studies didn't specify the specialization (Ward et al., 2011) or, they are students together with professionals (MacNab & Worthley, 2012; Ming et al., 2013). More than that, we did not found in literature any study carrying out a comparative analysis of the investigated populations in terms of the professions/fields of study. The extensive study conducted by Li et al. (2013) analyzes the personality factors that influence CQ, based on a sample of 294 international professionals, with multiple nationalities and from various occupational functions and positions, but their results do not take into account the occupation.

In addition to the comparison between management and non-management students in this paper, we want to analyze certain variables which might determine an increase in cultural intelligence. In this respect, we mention some important studies that analyze, at theoretical (modeling) or empirical level, the most important determinants of CQ. Thus, Ang & Van Dyne (2008) introduces the concept of Nomological Network Of Cultural Intelligence, which includes variables related to personality, demographic factors, biographical informations, and ethnocentrism. Shannon & Begley's study (2008) highlights the foreign language abilities and international work experience as predictors for CQ, while Crowne's study (2008) shows that the cultural exposure (defined by employment and education abroad) influences the CQ. In this approach, the depth of exposure is also important, defined as the number of countries an individual has visited for education and employment purposes, and was validated as having a significant influence on the CQ of an individual. Tariq & Takeuchi (2008) proved that the number and length of international experiences undergone by students prior to starting university (even starting from young ages), positively influence the cultural intelligence. Sahin et al. (2013) concluded that the CQ factors are personality and international assignment, and has validated a positive relation between the international assignment and the CQ, for all four components. Harrison (2012) has analyzed the variables that influence ethnocentrism and CQ, and also the influence of these two variables on “cultural interaction” variable. The result shows that both variables are influenced by the variables related to personality and early life experience that are subsequently influencing the “intercultural interaction” variable.

At the level of groups of students, according to Pless et al. (2011), an internship abroad in analyzed students' expertise led to their CQ's growth. Eisenberg et al. (2013) indicate that prior international experience for students (measured by the number of countries in which students lived, worked, or were educated for at least six months), enhances their CQ. Also, the study by Erez et al.
(2013) demonstrated the positive impact of students’ involvement (in the online environment) in multicultural teams or in a short-term project, enhancing their CQ.

After this review of the literature, we can conclude that cultural exposure is an important variable often analyzed as a CQ predictor. For this reason, this paper will analyze the impact of personal cultural exposure on the CQ of an individual. Other variables such as the demographic variables (gender), parental occupation (parents working in MNC, with expatriate missions) are also taken into account.

1. Research Methodology and Statistical Results

A questionnaire-based survey was used for data collection among university students gathering a number of 114 questionnaires for management and 64 for non-management students. Students belonged to the same university, West University of Timisoara, from a major city in western Romania. The 20-item questionnaire of Ang et al. (2007) was used for this purpose. The questionnaire is composed of four subscales: Cognitive (6 items, \(a = 0.82\)), Meta-cognitive (4 items, \(a = 0.80\)), Behavioral (5 items, \(a = 0.78\)) and Motivational (5 items, \(a=0.76\)). Responses were assessed on a scale of 1 to 5, with higher scores representing a higher level of cultural intelligence. From a demographic point of view, 64% of management respondents are female, the median age is 21 years and the modal age is 20 years. As for the non-management student, 79.6% are females, the median age is 21 years and the modal age is 19 years.

In respect to direct cultural exposure, several observations can be made. First, direct cultural exposure is significantly low: 93% of management and 98.4% of non-management students never studied abroad (including as Erasmus students) and, moreover, 95.6% of management and 96.8% of non-management students never participated in an internship abroad (including programs such as work and travel). On the other hand, the particular travels are more important, since only 20% of management and 30% of non-management students were declaring that they never travelled abroad. It can be pointed out that the cultural exposure is a little higher for management students compared to non-management students.

In this paper, two variables have been considered to measure the influence of cultural exposure on CQ. The first variable is the total period of travel abroad measured on a five level scale. The results obtained with ANOVA test show no statistical significance (non-management: \(p=0.326\); management: \(p=0.988\)). The second is a score variable composed of four binary (yes/no) variables: parents working in multinational companies, parents with expatriate missions, study abroad and internships. The results obtained with the same test show also non significant results (non-management: \(p=0.416\); management: \(p=0.648\)). We may conclude that cultural exposure is not a statistical significant factor for CQ for the surveyed population.

In Figure 1, the mean score obtained for each CQ dimension and the great mean (CQ) are comparatively presented for both, management and non-management students. All four dimensions (motivation, behavior, strategy and
knowledge) are calculated by averaging the initial questionnaire items measured on the 5 points Likert scale. The cultural intelligence (CQ) is the average of all four dimensions.

As a preliminary analysis, the variance homogeneity assumption (Levene test) and the normality assumption (skewness and kurtosis) were verified. According to Levene test, the assumption of variance equality between management and non-management students cannot be rejected for any of the cultural intelligence dimensions. Instead, the normality assumption failed in several cases. By consequence, the decision was taken to double the t-test for means equality with the non-parametric Mann-Whitney test for more general differences in the distributions of the two students groups. The tests results can be seen in the Table 1 and Table 2.

![Figure 1. Mean scores for cultural intelligence (CQ) and its dimensions by student groups](image)

<table>
<thead>
<tr>
<th>Table 1. T-test results (the null hypothesis: the mean score for the two students groups are the same)</th>
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<td><strong>Mean value</strong></td>
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<td><strong>Management</strong></td>
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<td>Motivation</td>
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<td>Behavior</td>
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<td>Strategy</td>
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<td>Knowledge</td>
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<td>CQ</td>
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Table 2. Mann-Whitney test results (the null hypothesis: the mean score rank for the two students groups are the same/ the two distributions are the same)

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<thead>
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<th>Mean Rank</th>
<th>P-value (2-tailed)</th>
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<tr>
<td></td>
<td>Management</td>
<td>Non-management</td>
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<tr>
<td>Motivation</td>
<td>89.094</td>
<td>89.728</td>
</tr>
<tr>
<td>Behavior</td>
<td>81.867</td>
<td>93.785</td>
</tr>
<tr>
<td>Strategy</td>
<td>91.367</td>
<td>88.452</td>
</tr>
<tr>
<td>Knowledge</td>
<td>96.938</td>
<td>85.325</td>
</tr>
<tr>
<td>CQ</td>
<td>89.023</td>
<td>89.768</td>
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As noted above, according to t-test, the hypothesis that the mean score is the same for the two student groups cannot be rejected for CQ and any of its dimensions. Mann-Whitney test results reveal that the hypothesis of different distributions cannot be rejected either. Moreover, the pattern of the mean score is exactly the same across the four dimensions. The highest scores are obtained for motivation followed by strategy, behavior and knowledge (table 1) for both management and non-management students. As a general conclusion no significant difference is found in the scores of cultural intelligence between management and non-management students.

2. Conclusion and Future Work

In this paper, we analyzed CQ for management and non-management students from a Romanian university. The main goal of this analysis is to discover if there are differences between these two groups of students and to identify several factors that determine a higher level of CQ.

The first conclusion of the study is that there are no significant differences between the two groups, for all four dimensions of CQ. It can be stated that this result highlights that the cultural impact of globalization, new technologies and media has led to a relative homogenization of CQ profile of an university student in a stronger/ more intense way than could differentiate educational profile.

Considering the four dimensions of CQ, Motivation and Metacognitive dimensions are the most developed since they have the highest values for both groups (the values are identical). The result is confirmed by the study carried out by Putranto et al. (2015) for the business students from Indonesia, but the study conducted by Eisenberg et al. (2013) only partially confirm our results: in the case of students from a university in Austria, the authors identified Motivation and Behavior dimensions as most developed.

The high level for Motivation dimension can be explained by respondents’ age and academic environment, both of them encouraging the interest and potential for international contacts (common projects, mobility, lectures of visiting professors). The high level for the Metacognitive dimension indicates that young students use consciously intercultural interactions, knowing the potential for
personal development potential that these interactions possess. Also, it can be concluded that the analyzed students are aware of the possibility of transmission of their own values to other people from other cultures.

The results are useful because they can help to understand the extent to which researched students will be able to adapt to future intercultural situations. Studies by Ang et al. 2004, Ang et al. 2007 argue that Strategy and Motivation CQ's influence cultural judgment and decision-making, as well as the general cultural adjustment. In the same time, high levels for Motivation dimension determine lower levels of depression and fewer social problems during cross-cultural transition (Ward et al. 2009).

However, it can been observed that the other two CQ dimensions, Behaviour and Knowledge, are less developed for these researched groups of students. These two dimensions are obviously related, because a better understanding of intercultural issues generates an appropriate behavior. As far as the Knowledge dimension would be more developed, future professionals (regardless of their profession) may be effective in intercultural teams, being able to understanding and building effective cultural interactions, this attitude generating "tradeoffs" focused on a win - win approach. The low level of Knowledge dimension indicates that a number of actions are required (personal and educational) for its development. From the educational point of view, the results indicate that the university curricula should be oriented towards the inclusion of Cross Cultural Management (CMM) topics, which will result in Knowledge dimension development. These recommendations are supported by findings of studies conducted by Eisenberg et al. (2013) and Putranto et al. (2015). In these studies, students were tested before and after studying for a Cross Cultural Management course, and the results, in both cases, indicated an improvement in Knowledge dimension. In particular, the study by Eisenberg et al. (2013) indicates that studying Cross Cultural Management courses, Knowledge dimension recorded substantial improvements, compared to Motivation and Behavior. Also, the study of Putranto et al. (2015) clearly indicates that, from all components of CQ, the largest increase after the Cross Cultural Management course, was observed in the Knowledge dimension of CQ.

Given the average score obtained for overall CQ, it can be considered that all sizes require development measures for Romanian students (business and non-business), this approach being supported by tested benefits from other studies (Putranto et al., 2015, Ramsey and Lorentz, 2016 ; Eisenberg et al., 2013, Erez et al., 2013 ; McCrea and Yin, 2012). WE recommend to develop Universities’ curricula by introducing several courses generating transversal skills, which are developing the CQ components, since they can contribute to the success of such an approach. The findings of the 2016 AACSB (Association to Advance Collegiate Schools of Business) Report support these conclusions and the need for paradigm shifts: „The school fosters sensitivity toward and greater understanding of cultural differences and global perspectives. Graduates should be prepared to pursue business or management careers in a global context. Students should be exposed to
cultural practices different than their own” (p 6). Although, this report refers to business students, we consider that its recommendations can be extended to all fields of study, including technical, because the work in intercultural teams, international projects has become the norm in international organizations, businesses or not.

An important limitation of this study refers to the studied sample (students), being obviously that the findings cannot be generalized to the population of a country. The study used a convenience - sampling approach, which can give us useful information about the target group studied.

Regarding the factors that are generating a higher level of CQ, study's results are inconclusive. For analyzed students groups, the cultural exposure is very low, 90% of them never studied abroad and didn't participate in any internship. From the statistical point of view, for both cultural variables that measure exposure, and were analyzed as determinants of CQ, the resulted correlations are not statistically significant. This prevents us to draw clear conclusions about the role of international exposure in the CQ development of analyzed students. However, our study shows that the educational process should intervene. We base our recommendation on the fact that recent studies (Putranto et al., 2015; McCrea and Yin, 2012; Erez et al., 2013) indicated that education for CQ development is not achieved solely through courses, but, also, through field trips, international study tour or participation in virtual international projects.

Regarding future researches, they can be grouped into three major categories. First, we will study the effect of education (teaching a course in Cross Cultural Management) on students’ CQ. We will try to conduct studies before and after this kind of course for business and non–business students and to test its impact on CQ. The second approach for future research will be focused on making comparisons between students from different cultures. Romanian students CQ profile will be compared with the CQ profile of students of other nationalities, in order to identify the differences and similarities between them.

Also, the questionnaire used to assess CQ, although it has been used until now in most studies, is subjected to criticism for errors in the conceptualization of the construct (Thomas et al., 2008). It is an approach that evaluates, in fact, a self-perception about the ability of individuals to behave effectively in different cultural environments. To overcome these criticisms, the third direction of future research will use another more recent and complex tool, namely the Cultural Business Intelligence Quotient (BCIQ) model, proposed by Alon et al, 2016.

References


