COMPARATIVE EVIDENCES OF CULTURAL INTELLIGENCE PROFILE
FOR MANAGEMENT AND NON-MANAGEMENT STUDENTS

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ABSTRACT: Cultural intelligence (CQ) is known as individuals'ability to act efficiently in different cultural contexts. Due to increased globalization over the past 20 years, the number of people who currently get in touch with other cultures has grown significantly [10]. In this context, it could be considered that to develop cross - cultural competencies is useful, even necessary, not only for managers but also in other fields. This finding led us to carry out a comparative analysis between Romanian students from various specializations. For a better understanding of students' CQ, we classified them into two distinct groups, management and non-management students, using Earley&Ang's multidimensional concept as an analysis framework [9]. Given that CQ is a multidimensional concept, this paper will analyze the answers for each of the four CQ dimensions, in order to identify which of the four capabilities is more or less developed among studentsand which is the detailed differences and similarities between the two groups. Whereas the literature highlights the influence of cross/cultural management academic courses on CQ [10, 21, 22], the final purpose is to understand differences/similarities between the two groups in order to adapt the university curricula to students' real needs.
KEYWORDS: Cultural intelligence, university students, Romania, higher education, cross-cultural courses.

1. INTRODUCTION

The exponential growth of globalization, business processes and markets internationalization, economy digitalization, as essential features of XXIst century world, led to fundamental changes in labor market. These changes determine an intensive international labor mobility [28], but also a significant growth of Internet-based communication, enabling virtual work teams, geographically and culturally dispersed [18, 25].

One of the great challenges that generates these changes relate to increased cultural diversity: for profesionals, it is no longer enough only technical knowledge, but also the ones that makes them capable and effective in cross-cultural work environment. It could be said that globalization provides a demand for employees prepared to interacting across cultures [6]. But the ability to interact effectively in multiple cultures is not a skill possessed by all [8]. Some individuals are more successful than others in a cross-cultural business situation.

The concept of cultural intelligence (CQ) was developed just to help understanding why some individuals are more effective than others in culturally diverse situations. It was created by Earley and Ang [9] 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 subsequent studies [1, 2, 4, 5, 8, 19, 22, 29, 30, 31, 32]. The essential guideline of these studies is that CQ is appropriate to describe the capability of individuals to use the correct skils and abilities in unfamiliar and ambiguousenvironments. As a synthesis of the definitions of CQ, it can be said that how greater the cultural intelligence of an individual is, so much he will be able to handle efficiently various cultural context [4]. And, the need to have this type of intelligence increases in a more globalized world, because even if an individual does not get to work

outside the country, he still have contact with customers, suppliers or business partners from other cultures [8].

The origins of this concept are found in the literature on cross- cultural management, but the best known is the model proposed by Ang et al. [4]. They described CQ as a multidimensional concept, „targeted at situations involving cross-cultural interactions arising from differences in race, ethnicity and nationality". CQ thus comprises four components, distinctive but interrelated: 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).

Metacognitive CQ refers to the mental processes that individuals use 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 believe that people with high metacognitive CQ are able to question cultural assumptions, to adjust their mental models in intercultural situations. They are aware of others' cultural preferences before and during interactions.

Cognitive CQ refers to the knowledge of the norms, practices and conventions in different cultures, acquired from education and personal experiences. A person with high cognitive CQ knows and understands the economic, legal and social contexts of different cultures. They are also capable to build accurate expectations and interpretations of cultural interactions.

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 variable that determines in the essential way the expats' success and leadership effectiveness [7].

Behavioral CQ reflects the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures. Those with high behavioral CQ exhibit situationally appropriate behaviors based on their broad range of verbal and nonverbal capabilities.

In this paper, we will study the intercultural intelligence among management and non-management students in Romania. This study represents a resuming of our earlier research in which we analyzed CQ only for students in management [6], but also other professions[1], we considered useful to extend the analysis on students from other specializations. From this perspective, the present paper covers a gap in the literature, as far as the most part of the studies that analyze CQ are focused on national contexts and comparisons of several national contexts. The previous studies was carried out having as subjects (1) students of some national universities, without taking into account the specialization[4, 11, 17, 32], (2) professionals expats [13, 14], (3) managers and management students [15, 17], or (4) a particular profession, such as the military service [23, 26].

The empirical studies that analyze students' CQ are relatively recent and not very numerous. These are predominantly focused on the presentation of a single national context [11, 21], the comparison of two national contexts [4], or the study of international students from universities [17, 32]. Meanwhile, students who represents the surveyed population are mostly business students [4, 11, 21]or, the studies didn't specify the specialization [32]or, they analyze students together with professionals[15, 17]. More than that, we didn't found in literature some studies carrying out a comparative analyze the investigated populations in terms of the professions/specializations. The extensive study conducted by Lin et al. [14] 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 the results do not take into account the occupation.

Besides the comparison between management and non - management students, through this paper, we wish to analyze certain variables which might determine a growth in cultural intelligence.It can be mentioned some important studies that analyze, at theoretical (modeling) or empirical level, the most important determinants of CQ. Thus, Ang& Van Dyne introduces the concept of Nomological Network of Cultural Intelligence, which includes variables related to personality, demographic factors, biographical information, and ethnocentrism [2]. Shannon & Begley's study highlights the foreign language abilities and international work experience as predictors for CQ [24], while Crowne's study shows that the cultural exposure (defining by employment and education abroad) influences the CQ [8]. In this approach, the depth of exposure is also important: the number of countries an individual had visited for education and employment purposes has a significant influence on a personal CQ. Tarique& Takeuchi 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 [27]. Sahin et al. concluded that the CQ factors are personality and international assignment, being validated a positive relation between the international assignment and the CQ, for all four components [26]. Harrison has analyzed the variables that influence ethnocentrism and CQ, but also the influence of these two variables upon the cultural interaction [12]. The result shows that both variables are influenced by the variables related to personality and early life experience, influencing in turns the intercultural interaction

At the level of groups of students, according to Pless et al. [20], an internship abroad in analyzed students' expertise led to their CQ's growth. Eisenberg et al. indicate that prior international experience for studens (measured by the number of countries in which students lived, worked, or were educated for aat least six months), enhance the CQ [10]. Also, the study by Erez et al. [11]demonstrated the positive impact of students' involvement (in the online environment) in multicultural teams or in a short -term project would enhance their CQ.

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

2. 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. It was used the 20 - item questionnaire of Ang et al. [4]. 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, themedian age is 21 years andthe modal age is 19 years.

Regarding direct cultural exposure, several observations can be made.The direct cultural exposure is significantly low: 93% of management and 98.4% of non-management students never studied abroad (including Erasmus) and, moreover, 95.6% of management and 96.8% of non-management students never participated in an internship abroad (including work and travel). On the other hand, the particular travels are more important, only 20% of management and 30% of non-management students declaring that never travel abroad. It can be remarked that the cultural exposure is a little bit higher for management students

In this paper,two variables have been considered to measure the cultural exposure influence 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 CQfor the surveyed population.

In the Figure 1, the mean score obtained by each 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 obtained by averaging the initial questionnaire items measured by 5 points Likert scale. The cultural intelligence (CQ) is the average of all four dimensions.

In 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 fails 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 Table1 and Table 2.
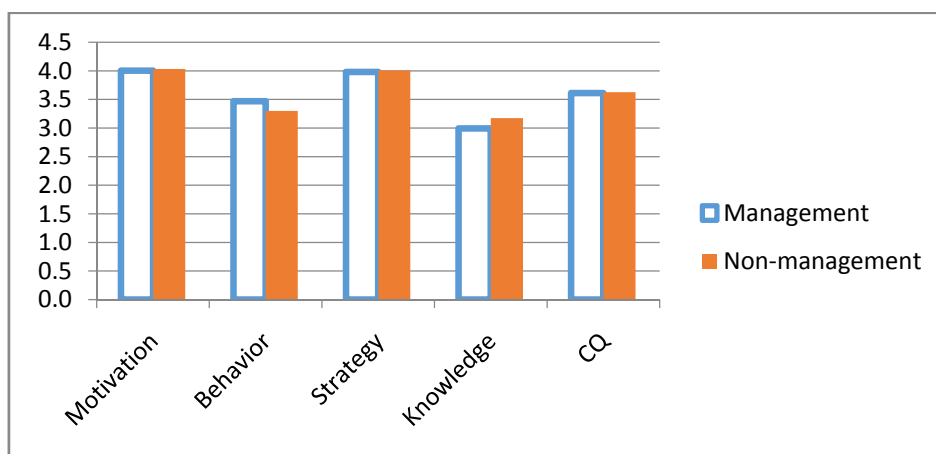
Figure 1. Meanscores for cultural intelligence (CQ) anditsdimensionsby student groups

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.

Table 1. T-test results (the null hypothesis: the mean score for the two students groups are the same)

	Mean value		p-value
	Management	Non-management	(2-tailed)
Motivation	4.004	4.031	0.818
Behavior	3.468	3.299	0.243
Strategy	3.982	4.008	0.822
Knowledge	2.993	3.174	0.111
CQ	3.612	3.628	0.847

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)

	Mean Rank		p-value
	Management	Non-management	(2-tailed)
Motivation	89.094	89.728	0.937
Behavior	81.867	93.785	0.137
Strategy	91.367	88.452	0.716
Knowledge	96.938	85.325	0.148
CQ	89.023	89.768	0.926

3. CONCLUSION AND FUTURE WORK

In this paper, we analyzed CQ for business and non business students from Romania. 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 the lack of 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 in a stronger/ more intense way than could differentiate educational profile.

Considering the dimensions of CQ, Motivation and Metacognitive dimensions has the highest values for both groups (the values are identical). The result is confirmed by the study carried out by Putranto et al. [21] for the business students from Indonesia, but the study conducted by Eisenberg et al. [10] 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 justified by respondents' age and academic environment, both of them encouraging the appetency and potential for international contacts (common projects, mobility, visiting professor's lectures). The high level for Metacognitive dimension indicates that young students use consciously intercultural interactions, identifying the personal development potential that these interactions may have. Also, it can be concluded that the analyzed students aware the possibility of transmission of their own values others.

The results are useful because they can help to understand the extent which analyzed students will be able to adapt to future intercultural situations. Studies by Ang et al. [3,4] argue that Strategy and Motivation CQ's influencecultural judgment and decision-making, as well as the general cultural adjustment. At the same time, high levels for Motivation dimension determine lower levels of depression and fewer social problems during cross-cultural transition [32].

But, it can been observed that the other two dimensions, Behaviour and Knowledge, are less developed for these 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 exactly construing of cultural interactions, this attitude generating "tradeoffs" focused on a win - win approach. The low level of Knowledge dimension shows that a number of actions are required (personal and educational) for its development. From the educational point of view, the results indicate that 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. and Putranto et al. [10, 21]. In these studies, students were tested before and after the Cross Cultural Management course, and the results, in both cases, indicate an improvement in Knowledge dimension. In particular, the study by Eisenberg et al. [10] indicates that by the Cross Cultural Management courses, Knowledge dimension recorded substantial improvements, compared to Motivation and Behavior. Also, the study of Putranto

et al. [21] clearly indicates that, from all components of CQ, the largest increase after the Cross Cultural Management course was registered in dimension Knowledge.

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 (10, 11, 16, 21, 22]. Universities' curricula development by introducing some courses generating transversal skills, which are CQ components, 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 [33]: „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".Although, this report refers to business students, we consider that its recommendations can be extended to all fields, including technical, because the work in intercultural teams, international projects It is not only reserved for business graduates.

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, but which can give us useful information about the target group studied.

Regarding the factors that cause 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, in both cultural variables that measure exposure, and were analyzed as determinants of CQ, the obtained correlations are not significant. This prevents us to draw clearly conclusions about the role of international exposure the development of analyzed students' CQ. But, at the same time, also, it shows that the educational process must to intervene. This is because according to recent studies [11, 16, 21] 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 of them will be a study that includes 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 comparisons between students from different cultures. Romanian students profile will be compared with that of students of other nationalities, 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 [29]. 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 tool, namely the Cultural Business Intelligence Quotient (BCIQ) model, proposed by Alon et al. [1].

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