Research Article

Frontiers: The Interdisciplinary Journal of Study Abroad

Volume 34, Issue 4, pp. 144-171
DOI: 10.36366/frontiers.v34i4.731
www.frontiersjournal.org

Study Abroad Develops Cultural Intelligence for International Business Effectiveness, Special Relevance for PELL Students

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Abstract

The global economy and COVID created an interdependency where managers work in multiple countries, requiring cultural awareness. Cultural Intelligent (CQ) is a recent concept described as predictor of cultural adaptation. We studied 188 international business university students in terms of gender, language, major, financial need, and study abroad. We found no statistically significant gender differences in CQ, but we found differences in having a second language, level of studies, and study abroad experience. We also found PELL students develop more CQ than the rest of the students while studying abroad. This study helps to understand the key elements to develop CQ among international students to be effective in the present global business world and to promote the participation of PELL students in study abroad experiences.

Abstract in Spanish

La economía global y COVID crearon una interdependencia en la que los gerentes trabajan en varios países, lo que requiere conciencia cultural. La Inteligencia Cultural (CQ) es un concepto reciente descrito como predictor de adaptación cultural. Estudiamos a 188 estudiantes universitarios de negocios internacionales en términos de género, idioma, especialización, necesidades financieras y

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Accepted date: 31 July 2022

estudios en el extranjero. No encontramos diferencias de género estadísticamente significativas en CQ, pero encontramos diferencias en tener un segundo idioma, nivel de estudios y experiencia de estudios en el extranjero. También encontramos que los estudiantes PELL desarrollan más CQ que el resto de los estudiantes mientras estudian en el extranjero. Este estudio ayuda a comprender los elementos clave para desarrollar CQ entre los estudiantes internacionales para ser efectivos en el mundo empresarial global actual y promover la participación de los estudiantes PELL en experiencias de estudio en el extranjero.

Keywords:

Cultural intelligence, study abroad, gender, international business

Introduction: Global Business and Cultural Intelligence

The business world is global: 44% of sales of the S&P 500 companies are international (The Economist, 2019). The globalization has created a more complex and dynamic environment where firms compete to achieve sustainable growth (Caligiuri, 2006), with increasing complexity and dynamism (Friedman, 2005), increasing the number of people with international responsibilities (Zakaria, 1999).

Several studies reported 40% of expatriate (business executives working in a different country than their own) failure in developed nations and up to 70% in developing countries (Anderson, 2003; Cole, 2011; Harvey & Moeller, 2009; Stroh et al., 2000), but expatriates are increasing and expected to continue (EY, 2013). Expatriate failure cost of up to three times the salary of the employee and companies report that 30% to 50% of their expatriates, with average salaries of 250,000USD, are considered ineffective or marginally effective (Hill & Hunt, 2018). Employees face cross-cultural issues on their jobs with more international business and diversity (Van Dyne et al., 2008). It is crucial to identify factors leading to intercultural harmony and effective functioning in multicultural contexts (Ang et al., 2015). Cross-cultural competence and skills are not only desirable, but rather necessary (Ng et al., 2009)

Developing managers with global mind-set and cultural intelligence is a major challenge for corporations (Caligiuri, 2013; Javidan & Teagarden, 2011).

International assignments became a competence development role (Evans et al., 2011; Stahl et al., 2009). Several studies demonstrated that cross-cultural experiences and competence are either predictors or mediators of performance while working overseas or when working extensively with culturally diverse populations (e.g., Earley & Peterson, 2004; Kim & Van Dyne, 2012). Corporations need people who work with others understanding and respecting differences around the world (Wagner, 2008).

The ability to interact effectively across cultures, or *intercultural competence,* is key for the success in today's global business environments (Johnson et al., 2006). Cultural diversity enhances creative outputs but often culminates into cultural clashes (Ang et al., 2011). Communication between cultures is difficult because there are different values and little amount of previous contact with the other culture (Bucker & Korzilius, 2015). Multicultural team members have disparate cultural perspectives and expectations regarding work norms and procedures, which create challenges that do not exist in local homogeneous teams (Cascio & Shurygalio, 2003; Janssens & Brett, 2006). Many consider cross-cultural competencies to be predictor of success in international business and intercultural interactions (Johnson et al., 2006).

Multiple intelligence theory (Gardner, 1993) proposed different types of intelligences that served to various domains. Cognitive intelligence (IQ), or general intelligence, can be defined as the ability to grasp and reason correctly with abstractions (concepts) and solve problems (Schmidt & Hunter, 2000). Social intelligence can be defined as one's ability to accomplish relevant objectives in specific social settings (Ford & Tisak, 1983). Emotional intelligence can be defined as a collection of emotional abilities that constitute a form of intelligence that is different from IQ (Bechara et al., 2000). CQ is operationalized as a specific form of intelligence focused on an individual's ability to grasp and reason correctly in situations of cultural diversity (Ang & Van Dyne, 2008a; Earley & Ang, 2003). Growing research on cultural intelligence has revealed its impact on behavior in culturally diverse settings as a comprehensive ability (Ang et al., 2007).

Cultural intelligence (CQ) is a concept that has gained considerable attention. It was introduced in an article by Earley (2002) and in Earley and Ang's (2003) book *Cultural Intelligence: Individual Interactions across Cultures*. Cultural intelligence is 'a person's capability for successful adaptation to new

cultural settings, that is, for unfamiliar settings attributable to cultural context' (Earley and Ang 2003, p. 9). Individuals with high CQ are culturally competent, having a repertoire of cognitive, behavioral, and motivational abilities to work effectively with members of different cultures and adapt to foreign environments. A person able to generate new interpretations and behavior in a culture where their learned cues and behaviors do not fit has high CQ. People with high CQ expect that misunderstandings will happen in other cultures and, as a result, they delay judgment of any situation until they accomplish understanding (Brislin et al., 2006). CQ does not relate to effectiveness in a specific culture but to the effectiveness in the particular situation of cultural plurality (Ang & Van Dyne, 2008b). However, knowledge of what is considered intelligent everyday behavior in other cultures, and how it contrasts with intelligent behavior in the cultures of their own socialization helps in understanding how to adjust behavior to function effectively in a different culture (Brislin et al., 2006, p. 45).

CQ was linked to efficient cross-cultural communication and decision-making (Ang et al., 2007), global leadership (Rockstuhl et al., 2011), expatriate success (Shaffer & Miller, 2008), lowered expatriate burnout (Tay et al., 2008), and efficient performance (Oolders et al., 2008). Several studies confirm the positive influence of CQ on intercultural cooperation (Mor et al., 2013), intercultural negotiations (Groves et al., 2015; Imai & Gelfand, 2010), intercultural creative collaborations (Chua et al., 2012) and its role in reducing anxiety during cross-cultural interactions (Bucker et al., 2014). Overall, these scholars demonstrate how CQ can be leveraged to benefit an individual working in an international context. Peng et al. (2015) argue that higher motivational CQ before an international experience facilitates learning during the experience, which then leads to increased cultural effectiveness. Higher levels of CQ increase the positive impact of leadership on adjustment and performance (Lee et al., 2013) and in- novation adoption (Elenkov & Manev, 2009) among expatriates. CQ was validated as a predictor of international leadership potential (Kim & Van Dyne, 2012) and was found to be positively associated with leadership effectiveness, specifically in the context of (1) cross-border activities (Rockstuhl et al., 2011) and (2) culturally heterogeneous teams (Groves & Feyerherm, 2011). Cultural intelligence is a relatively new construct, but according to Engle and Crowne (2014), research has shown positive results regarding the link between successful leadership and high cultural intelligence.

Previous experience of expatriates in overseas departments and with foreign nationals within their country prior to their expatriation has positive relationship with cognitive CQ and metacognitive CQ, respectively (Moon et al., 2013). Shaffer and Miller (2008) reported CQ as a success factor for expatriates. There is a positive effect of international experience on all CQ dimensions (Engle & Crowne, 2014; Morrell et al., 2013; Şahin et al., 2014). Eisenberg et al. (2013) had the same result in respect of metacognitive, cognitive, and motivational CQ. International non-work experience positively relates to each of the CQ dimensions, whilst international work experience shared a positive association with only metacognitive and cognitive CQ (Moon et al., 2012). Exposure to other cultures also contributed to improving CQ (Crowne, 2013; Kim & Van Dyne, 2012). The most important factors leading to cultural intelligence, in order of importance, are the number of countries that business practitioners have lived in for more than six months, their level of education, and the number of languages spoken. Cultural intelligence varies across countries, suggesting that some countries have a higher propensity for cross-cultural business interactions. (Alon et al., 2018) (from Austria, Colombia, Greece, Spain, and USA).

The behavioral facet of CQ appears to be the least likely to develop through international experience, with Wood and St. Peters (2014) attributing this to the absence of direct interaction with members of other cultures among their participants. Finally, Eisenberg et al. (2013) demonstrated that international experience significantly relates to CQ before taking any cross-cultural management course, but after participated in such a course it no longer caused an effect, which challenges the necessity of international experience for CQ development. As summary, Solomon and Steyn (2017) after a systematic review of the literature concluded that I) cultural intelligence and cross-cultural adjustment relate positively; II) cross-cultural training and experiential learning stimulate cultural intelligence; III) cultural intelligence improves cross-cultural job performance, satisfaction, involvement, and adaptation; and IV) international experience and exposure progress cultural intelligence.

After the literature review, we found CQ is important for International Business students in order to be effective in the global business, but we want to find if there are significant differences in CQ among those students regarding their sex, languages, business and level studies and financial needs and we elaborated the next hypotheses:

H1: There are no statistically significant differences in any of the CQ factors regarding the sex of the students.

H2: Students speaking a second language have a statistically significant higher CQ than those speaking only one.

H3: Student who studied abroad have a statistically significant higher CQ than those who did not studied abroad.

H4: Students with International Business major have a statistically significant higher CQ than those of other majors.

H5: Students with significant financial needs have a higher CQ than those who do not have those needs.

Materials and Methods

To evaluate the hypotheses, we used a sample of 188 business major university students participating in an International Business class. Those students were 98 men and 90 females; 166 undergraduates and 22 MBAs, 24 with IB major and 164 other Business majors; 37 spoke a 2nd language at home, only 40 of them studied abroad and 14 were PELL eligible. In terms of age, they were very young (MBA: 11 20-22 age and 11 23-29; Undergrads: 58 in the 17-19 age, 105 in the 20-22, and three in the 23-29 range of age), with none or very limited working experience and only one worked abroad. In order to study CQ in these students we used the CQS test developed by Earley and Ang (2003). They derived CQ as a multidimensional construct composed of four facets: metacognition, cognition, motivation, and behavior. Meta-Cognition Cultural Intelligence refers to one's cultural awareness during intercultural interactions. Cognitive Cultural Intelligence refers to knowledge an individual acquired through personal experience. Motivation Cultural Intelligence engages a person's interest in learning and functioning in cross-cultural situations.

The CQ Questionnaire is intended to be used to measure cultural intelligence levels in relation to the three areas of Earley and Ang's cultural framework: cultural strategic thinking (CST), behavioral intelligence (BEH), and finally motivational intelligence (MOT) (Earley et al., 2006). Ang et al. (2004) developed and validated the Cultural Intelligence scale (CQS) as a measure for the four-factor CQ construct. The final version of the CQS (Ang et al., 2007) was found to be valid and reliable across samples, time, countries (e.g., Singapore

and the United States) and methods (self- and peer ratings). Furthermore, the results of their six studies, conducted across different cultural, educational, and work settings, demonstrated that systematic relationships exist between CQ dimensions and specific intercultural effectiveness outcomes (Van Dyne et al., 2008). The four CQ dimensions are qualitatively different, and each contributes in its own fashion to culturally savvy and competent interactions. While the four CQ facets are considered as conceptually independent of each other, they tend to be moderately and positively correlated (e.g., Ang et al., 2007; Van Dyne et al., 2008)

Metacognitive cultural intelligence is defined as the conscious cultural awareness of an individual's own culturally related assumptions and knowledge. It involves high-level cognitive strategies that allow people to adjust to new cultural environments and to develop more appropriate heuristics and rules for social interactions in new cultural situations. In particular, the metacognitive factor has a positive effect on individual task performance in intercultural settings (Ang et al., 2007) in terms of assisting team members in developing an affect-based trust in collaboration in cross-cultural dyads (Chua et al., 2012) and in creating a fusion culture in teams, blending the diverse cultural values into one (Crotty & Brett, 2012). It enables understanding similarities and differences across cultures (Gardner, 1993) and specific patterns of interaction in cultures different from one's own culture of socialization (Ang & Van Dyne, 2008a).

Cognitive CQ reflects the actual knowledge a person has of other cultures, including language, religious beliefs, and behavioral norms and knowledge regarding economic, legal, and social systems of different cultures. The possession of such knowledge assists in building accurate expectations and interpretations of cultural interactions (Earley & Gardner, 2005). The motivational factor denotes the amount of energy that individuals are willing to direct toward cultural learning and adjustment, the intrinsic motivation driving them to engage in interactions with people from different cultures, and the level of competence that they experience when interacting in a culturally diverse environment. It has significant impact on the success of expatriates (Chen et al., 2010), and it was the strongest predictor of leadership effectiveness in cross-border contexts, when com- pared to intelligence quotient (IQ) and emotional quotient (EQ; Rockstuhl et al., 2011). Indeed, Ng et al. (2009) asserted that motivational cultural intelligence enhances the likelihood of individuals on

international assignments to actively engage in experiential learning and become more effective.

Behavioral cultural intelligence relates to the individual ability to act according to culturally accepted rules and actively adjust to culturally charged environments (Ang et al., 2006, 2007). Individuals with high behavioral cultural intelligence exhibit culturally appropriate words, gestures, and facial expressions that enable them to function effectively in a multicultural context. CQ requires having behavioral repertoire responses needed for a given situation" (Yordanova, 2011, p. 7).

To analyze statistically the sample with the CQ test we conducted a descriptive analysis of the variables. Initially we calculated the trend and dispersion (mean, mode, variance, standard deviation, minimum, maximum, significance). Later we conducted two variables analysis between the dependent and independent variables. We used contingency tables and the t of Student test evaluating the statistical significance and obtaining the confidence intervals /CI 95%). We established statistically significant association if $p<0.05$, with a strength and confidence interval at 95%. We will review now the statistical results of the hypothesis. The results of the 188 Business major students that voluntarily and anonymously completed the CQ questionnaire were statistically analyzed in order to find if there were statistically significant differences based upon ex, second language, IB major and financial need.

Results

Based upon the above theoretical review, sample, and statistical analysis we found the following results of the hypotheses presented:

> *H1: There are no statistically significant differences in any of the CQ factors regarding to the gender of the students*

Table (1) below indicates the results of the statistical analysis of the sample based upon their sex differences. We found not statistically significant ($p<0.05$) differences between male and female students. We validate the hypothesis.

TABLE (1): CQ OF MALE AND FEMALE STUDENTS

SEX	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
Men(N=98)	**84.14**	22.00	485	**35.58**	10.63	112.97	**27.95**	9.95	98.94	**21.32**	7.44	55.43
Women (N=90)	**85.71**	23.21	538	**35.21**	11.30	128.95	**28.72**	9.66	93.39	**21.51**	8.23	67.68
% Diff	1.87%			-1.04%			2.75%			0.89%		
*p <0.05			0.31			0.23			0.30			0.44

Women represented 65% of all US students studying abroad in 2000/01 and in 2015/16 still they represent a 66.5% (Snyder et al., 2019). Studying abroad is an area with high participation of women. But it seems practically nobody has made any significant research in Cultural Intelligence and gender. The empirical studies analyzing students' CQ are relatively recent and not very numerous. They are predominantly focused either on the presentation of a single national context (Erez et al., 2013; Putranto et al., 2015), either on the comparison of two national contexts (Ang et al., 2007), or on international students from universities (Ming et al., 2013; Ward et al., 2009). After analyzing several CQ reviews, we could find only that Al-Jarrah (2016) evaluated 169 international students (101 female and 68 males) and could not find statistically significant differences in gender among international students, but there were differences among nationalities, with American and European students having higher CQ values.

Engle and Nehr (2012) evaluated 137 Students and found Gender has almost a 0 correlation with Cultural Intelligence: a correlation coefficient of 0.005; and when Cultural Intelligence was regressed only against Gender (again, to avoid problems of correlations with other independent variables) the Adjusted R2 was -0.004 but the French students (n=42) had a higher cultural intelligence than students (n=95) from the United States. Shumaila et al. (2019) evaluated the interaction of psychological hardness with home sickness of students and conclude that those with higher cultural intelligence are less home-sick than those with lower CQ and that women were more homesick than men. Based upon the above results and discussion, we can conclude that our results are in line with the limited existing previous studies. There are no significant differences in Cultural intelligence between men and women.

H2: Students speaking a second language have a statistically significant higher CQ than those speaking only one language.

In Table (2) below we can see the results of the statistical analysis of the sample based on the differences between students who speak a second language at home and those who do not. We found statistically significant ($p<0.05$)

differences between groups in all the three factors (CST, MOT, and BEH) of CQ. We validate the hypothesis.

Table (2): CQ of IB Students Speaking a Second Language at Home

LANGUAGE	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
Others (n=37)	95.84	20.91	437	38.41	10.12	102	30.92	10.05	101	26.11	8.96	80
anguage (n=151)	82.26	22.19	493	34.07	11.00	121	27.68	9.66	93	20.26	7.06	50
	-14.17%			-11.30%			-10.48%			-22.41%		
*p <0.05			0.00*			0.03*			0,04*			0,00*

Of all 1,078,822 foreign students coming to USA on 2016/17, only approximate 37,000 came from English speaking countries (Snyder et al., 2019). For 96.6% of the students, English is not their native language. The emotional intelligence of each international student can be affected by external factors such as cultural background and communication problems that can be caused by language barriers (Riggio, 2010). Learning a foreign language also involves a certain exposure to the culture where the language has developed (Planken et al., 2004) and is both the result of a cultural context and an influence on cultural behavior (Holden, 2002). Language trainers transfer traditions, literature, cultural values, and assumptions to individuals, who then benefit from enhanced cultural knowledge and intercultural skills. Speaking a foreign language fluently cannot be achieved without adapting to how native speakers think, as the individual learns to adapt to the structure and rationale of the foreign language (Werry, 2005). Shannon and Begley (2008) empirically study the relationship between language skills and CQ among students in a university in Ireland, finding that learning new languages is positively related to cognitive and behavioral aspects of CQ.

Barner-Rasmussen et al. (2014) showed that language skills both complement and increase the effect of cultural skills on the effectiveness of boundary spanners in multinational corporations. Learning a new language is difficult and time consuming because the learner must spend numerous hours learning vocabulary, grammar, and context. He/she is usually committed and motivated to achieve fluency. It is expected, therefore, that individuals who master several foreign languages also develop their CQ.

By encouraging employees to learn the different languages spoken in the organization and markets, companies can not only improve their knowledge

transfer (especially tacit knowledge) but can also help individuals develop intercultural skills and get the most from their international assignments and intercultural teamwork (Ishii, 2012). Language competence, even at the intermediate level, increases the absorptive capacity of foreign cultures, especially when living abroad. The number of languages a leader speaks is one characteristic relevant for the development of a global mind-set, although experience abroad is also marginally correlated with a global mindset (Story et al., 2014). The ability to speak easily and accurately in the language that cross-cultural interactions require predicted all factors of CQ (Shannon & Begley, 2008).

Our results confirm previous studies indicating that speaking a second language contributes to have higher CQ. Speaking a second language helps to have a better cultural perspective and understanding.

H3: Student with a study abroad experience have a statistically significant higher CQ than those who did not studied abroad.

In Table (3) below we can see the results of the statistical analysis of the sample based on the differences between students who did have a study abroad experience and those who did not. We found statistically significant ($p<0.05$) differences between groups in all the three factors (CST, MOT, and BEH) of CQ. We validate the hypothesis.

TABLE (3): CQ OF IB STUDENTS WITH STUDY ABROAD EXPERIENCE

STUDY ABROAD	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
Yes (N=40)	**97.05**	23.57	555	**40.45**	11.30	128	**30.85**	9.75	95	**25.75**	8.68	75
No (n=141)	**81.05**	21.21	450	**34.01**	13.00	106	**27.35**	9.62	3	**19.96**	7.08	50
	-16.49%			-15.92%			-11.35%			-22.49%		
*p <0.05			**0.00***			**0.00***			**0,02***			**0,00***

In the year 2000/01, 154,168 US students studied abroad. In 2015/16, 325,339 did, marking a 111% increase from 2000/01. On the other hand, in 1980/81, 311,880 foreign students came to study in USA, compared to 1,078,822 in 2016/17, a 246% increase. This also marked an increase in the percentage of foreign students out of all university students, from 2.5% in 1980 to 5.4% in 2016/17. There was a 64% growth in the number of university students in the 1980-2017 period, but the forecast growth for the 2019-2027 is only 2% (Snyder et al., 2019). Foreign students are becoming progressively more relevant in US

universities; it might be the key for the future survival of American universities.

Habib et al. (2014) found that international students struggle most with social adaptation. Previous research showed academic performance of international students can be affected by factors such as cultural and emotional challenges. According to Li et al. (2010), "social integration into the university system, emotional support, and psychological health have all been identified to affect students' success in universities to some extent" (p. 3). Cultural intelligence can be increased over time with studying abroad (Gupta et al., 2013). The more individuals are entrenched in diverse cultures, the better chance of their having an appreciation for beliefs other than their own (Gupta et al., 2013).

Mohammad et al. (2014) concluded that emotional intelligence can significantly affect the stay of international visitors, because it can provide a more collaborative experience through better socialization. Emotional intelligence affects the personal thoughts and actions of individuals. Priya and Panchanatham (2014) stated that "it is a set of skills that not only leads to better academic and professional functioning but also good social interactions and healthy living, which result in personal satisfaction" (p. 2). With an increasing number of international students in American universities, there is a greater need to understand the social inabilities of these students (Kushner, 2010). The aim of the Study Abroad program, which typically runs for four months (a full semester) is to (a) increase students' language knowledge, (b) pre- pare them for international job placements by increasing their intercultural competencies, and (c) enhance their intellectual capacity by exposing them to different study programs and teaching methods (Eisenberg, 2013).

Tarique and 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. 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. Petrides and Sevdalis (2010) also concluded that international students must be

culturally intelligent to understand the differences that exist between their culture and that of the university in order to assist with the social integration process. Rienties et al. (2013) surveyed 191 international students and found that their home culture significantly affected the adaptability to the new culture.

Thompson (2018) revealed that emotional and cultural intelligence played an important role in enabling international students to integrate socially. Crowne (2008) conducted a study about what leads to cultural intelligence. The resulting study showed that "certain types of exposures to other cultures (such as education abroad and employment abroad) and the level of exposure from these experiences increases cultural intelligence" (p. 391). Crowne (2013) establishes that both the depth and the breadth of cultural exposure are strong predictors of CQ. In another study, Shannon and Begley (2008) report that international work experiences are positively related to self-awareness and motivational elements of CQ. Wood and Peters (2014) show that short-term study tours affect only three levels of CQ. In this sense, both quantity (length of exposure) and quality (type of exposure: work, education, vacation) of the cultural experience can improve one's CQ. Individuals who have experienced intense and long exposures in other countries learn to develop their cultural intelligence.

Crowne (2008, 2013) led the way in investigating this suggestion by measuring the impact of cultural exposure on university students' CQ and further comparing their CQ based on the type, breadth, or depth of the experience. Using Takeuchi et al.'s (2005) framework to differentiate work and non-work experiences, she demonstrated that the number of countries visited for work predict metacognitive, cognitive, and behavioral CQ, and the number of countries visited for non-work predict cognitive and behavioral CQ. The depth or type of the cultural exposure also makes a significant difference, with education or work abroad leading to higher CQ than other experiences, such as international vacations (Crowne, 2008, 2013). Varela and Gatlin-Watts (2014) use a pre and post-test design to show that international experience affects primarily the cognitive and metacognitive facets, and that only metacognitive CQ is predicted by the length of international experiences.

Students who participated in service-learning programs in host countries exhibited an increase in their cultural intelligence level over time (Pless et al., 2011). Swiss army officers who served abroad for long periods had

significantly higher levels of cultural intelligence compared to their peers who served mainly within their local country borders (Rockstuhl et al., 2011). International work experience (Shannon & Begley, 2008), international non-work experiences like studying and travelling abroad, number of countries visited (Tarique & Takeuchi, 2008) and level of cultural exposure (Crowne, 2008). Further, it was noted that CQ mediated the effect of international experience on intercultural effectiveness (Koo Moon et al., 2012). It was observed that highly culturally intelligent people were better able to capitalize from international experiences and transform their experiences into knowledge that guides their behavior in future cross-cultural interactions. Concurring to that, Ng et al. (2009) theorized the benefits of using CQ as a selection tool to identify employees with "international executive potential". Eisenberg et al (2013) suggests, following others (e.g., Earley & Peterson, 2004; Shannon & Begley, 2008) that international experience (i.e., living in foreign countries) increases one's cultural knowledge, pro- vides opportunities to develop self-efficacy to man- age culturally diverse environments, and makes students feel more at ease in culturally diverse environments. Sizoo et al. (2007) found that years lived abroad predicted students' intercultural sensitivity.

Finally, there have been a few recent studies that specifically examined the effects of international experience on CQ (Ang et al., 2011). Ang et al. (2011) noted that there are substantial inconsistencies among studies. For example, a series of studies by Ang et al. (2007) reported contradictory results regarding the relationship between international experience and CQ scores. In two of their studies, they found that international experience of both U.S. and Singapore undergraduates correlated with cognitive, metacognitive, and motivational CQ. In another study, they found that international managers' international experience (number of countries an expatriate worked in) correlated positively and significantly with all four dimensions of expats' CQ. However, a fourth study, conducted with midcareer foreign professionals, found that international experience (number of countries lived in) did not correlate with any CQ dimension (Ang et al., 2007). They also observed that not only were the effects of international experience on CQ inconsistent, the operationalization of "international experience" differed from study to study; while some studies used "length of stay" to assess international experience (e.g., Tay et al., 2008), others used "the total number of countries visited" to tap international experience (e.g., Crowne, 2008).

Ang et al. (2011) found that not all international experiences are equal and that the international experience needs to be substantial enough to bring about impact. Brancu et al. (2016) evaluating students found no statistically significant differences in CQ in relation to length of stay abroad. 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 Franklin-Craft (2010) also conducted one of the few studies applying cultural intelligence to the environment of higher education. He surveyed 465 students and concluded that international travel and communication about cultural diversity with other individuals contributes to higher levels of cultural intelligence. Cultural intelligence is a construct that can be improved over time. Ahn and Ettner (2013) conducted research focused on international graduate students in the United States. They found that international students understood the importance of cultural intelligence in a global environment, even though many had little culturally specific knowledge.

Engle and Crowne (2014) provide further evidence that even short-term international experiences increase all four CQ facets. For international students, the adaptation to the American culture can be easier to accomplish with the assistance of those who already understand the beliefs and norms of the culture (Yu et al., 2014). Continued social challenges have had a negative effect on the academic and social performance of international students in American universities (Sherry et al., 2010). Lam and O'Higgins (2012) argued that the major advantage for domestic students as compared to international students is that domestic students are well aware of the surroundings and the need to learn continually is nonexistent. According to them, this disadvantage means that international students must have a higher level of emotional and cultural intelligence than their counterparts. Studies have shown that social integration generates a standard of comfort for international students that create an environment where they can concentrate on classwork and receive better grades. For example, Rienties et al. (2013) found that a compensatory relationship exists between social adjustment and study performance. In a large-scale assessment of attitudes about studying abroad, Chieffo and Griffiths (2004) found that the vast majority of the 2,300 students surveyed perceived that studying abroad, even for a short period of time (as little as a week), had a perceived positive shift in their attitudes relating to a new global and cultural

awareness, open-mindedness, and an appreciation of the opportunities they have been given in the past.

Therefore, our results in our sample, confirming the hypothesis that study abroad has a possible impact in CQ, is aligned with multiple studies indicating this. Study abroad is a very positive experience for students to improve their learning in a different setting and facilitates the improvement of their Cultural Intelligence.

H4: Students with an International Business major have a statistically significant higher CQ than those with other majors.

Table (4) below shows the results of the statistical analysis of the sample based on the differences between students with an International Business (IB) major and those with other majors. We found statistically significant ($p<0.05$) differences between both groups in total CQ, MOT and BEH, but not CST. We (partially) validate the hypothesis.

TABLE (4): CULTURAL INTELLIGENCE OF INTERNATIONAL BUSINESS STUDENTS

IB MAYOR	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
IB MAYOR	**102.04**	17.47	305	**39.25**	10.98	121	**33.67**	7.95	63	**28.29**	7.99	64
(n=24)												
Others (n=164)	**83.8**	23.28	542	**35.64**	11.29	127	**27.9**	9.91	98	**20.89**	7.72	60
% Diff	-17.88%			-9.20%			-17.14%			-26.16%		
*p <0.05			**0.00***			0.07			**0,00***			**0,00***

Some studies suggest that higher levels of education may lead to greater open-mindedness and interest in learning about other people and cultures because, through education, individuals encounter different paradigms (Heckman & Kautz, 2012). For example, a student who studies different disciplines (science, literature, math, and art) may also develop a multilayered mental schema. Education increases the ability of people to interact with different cultures not only because it broadens their conceptual horizons, but also because students learning specifically about new cultures have direct exposure to cultural others among peers and educators (Baehr, 2013). Employment, education level (Crowne, 2008), virtual multicultural team exposure (Shokef & Erez, 2008), and CQ training programs (Koo Moon et al., 2012) were also found to be significant predictors of CQ. Brancu et al. (2016) did not

find statistically significant differences in CQ between Management and non-Management students.

Erez et al. (2013) with 1.221 Graduate students working as virtual teams, concluded: cultural intelligence and global identity, but not local identity, significantly increased over time and that this effect lasted for six months after the project had ended. Individuals learn better when they have to discover things by themselves rather than when they are told what to do (Leidner & Jarvenpaa, 1995). Also, Morell et al. (2013) indicate that prior international experience relates positively to all dimensions of cultural intelligence and that only metacognitive cultural intelligence and motivation cultural intelligence relate to increased satisfaction with the study of international business.

TABLE (5): CULTURAL INTELLIGENCE OF HONORS STUDENTS AND MBAS

HONORS	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
Undergrad	**86.61**	22.42	503	**35.54**	10.50	110	**28.89**	9.84	97	**22.12**	8.24	67.89
(n=153)												
Honors (N=31)	**76.81**	26.89	723	**32.71**	12.01	144	**29.45**	10.23	105	**17.81**	8.09	63.36
% Diff	-11.32%			-7.96%			1.94%			-19.48%		
***p <0.05**			**0.002***			0.09			0.39			**0.00***

UNDR/GRAD	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
Undergrad	**84.96**	23.44	550	**35.06**	10.79	116	**28.89**	9.84	97	**21.38**	8.37	70.07
(n=166)												
Graduate (n=22)	**93.54**	21.37	457	**43.5**	12.10	146	**29.45**	10.23	105	**24.14**	4.94	24.41
% Diff	10.10%			24.07%			1.94%			12.91%		
***p <0.05**			0.05			**0.00***			0.39			0.07

Table (5) shows not significantly differences between Honors Undergraduate students and those who did not belong to the Honors cohort. We found statistically significant differences only in the CST (cultural strategic thinking) values but with honors students having lower values than normal undergraduate students. On the other hand, when comparing undergraduate business students with MBA students we also did not find significant differences except also in CST, but with MBA students having statistically significant higher values than undergraduates. Combining the results of the two tables above with the few studies previously reviewed we could argue that "cultural intelligence

can be learnt," and that students with an International Business background have higher values (CQ= 102.04) than those with MBA (93/54) or honors students (76.81). This is consistent with the limited studies available (Einsenber et al., 2013; Solomon & Steyn, 2017) among students and it suggest these IB students are better prepared for the real challenges international managers faces in the present multi-cultural global environment. These results partially contradict also previous studies predicting that higher levels of education may lead to greater open-mindedness and interest in learning about other people and cultures because, through education, individuals encounter different paradigms (Heckman and Kautz, 2012).

For example, a student studying different disciplines (science, literature, math, and art) may also develop a multilayered mental schema. Employment, education level (Crowne, 2008), virtual multicultural team exposure (Shokef & Erez, 2008), and CQ training programs (Koo Moon et al., 2012) were found to be significant predictors of CQ. Brancu et al. (2016) did not find statistically significant difference in CQ between Management and non-Management students. Erez et al. (2013, p. 330) with 1.221 graduate students working as virtual teams, concluded: "cultural intelligence and global identity, but not local identity, significantly increased over time and that this effect lasted for 6 months after the project had ended". Individuals learn better when they have to discover things by themselves rather than when they are told what to do (Leidner & Jarvenpaa, 1995).

H5: Students with significant financial needs have a higher CQ than those who do not have those needs.

In Table (6) below we can see the results of the statistical analysis of the sample based on the differences between students that were PELL eligible (reflecting a high financial need) and those who were not. We found statistically significant ($p<0.05$) differences between in the BEH factor and the total CQ values. We validate partially the hypothesis.

TABLE (6): CQ OF IB STUDENTS, PELL, AND NO PELL

PELL	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
PELL (n=14)	**95.21**	28.88	834	**37**	12.36	53	**31.64**	10.19	104	**25.79**	12.6	159
No PELL (n=174)	**84.1**	21.86	478	**35.28**	10.86	118	**28.05**	9.74	95	**21.06**	7.23	52
	-11.67%			-4.65%			-11.35%			-18.34%		
*p <0.05			**0.04***			0.29			0,09			**0,01***

The results above indicate that financially challenged students have a statistically significant higher overall Cultural Intelligence (CQ 95.21) than the rest of the students (84.10) and that is due to their higher (25.79 vs. 21.06) BEH (Behavioral intelligence). We could argue that these students, quite likely belonging to underserved groups with higher financial needs and challenges, are intrinsically better prepared than normal students to face cultural challenges, because that is the normal situation the face in class and in their life in general. They have developed cultural intelligence and, particularly, Behavioral Cultural intelligence (BEH), as they had to adjust themselves already to a culturally challenging environment for them (and not for the rest of students). On the other hand, we could see the results with some limitations. Half of the PELL students in the sample had a study abroad experience (vs. 22% in the total sample) where we have seen that study abroad students have statistically significant higher values in all elements of CQ than those students who did not have that international experience. The study abroad experience, more than having financial difficulties could be the relevant variable for higher CQ values of these PELL students. In order to see if this is the case, we did additional statistical analysis:

TABLE (7): CQ OF IB STUDENTS WHO STUDIED ABROAD, WITH/WITHOUT PELL ELIGIBILITY

STUDY ABROAD	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
PELL (n=7)	**113.**	13,48	181	**39,3**	8,67	**75**	**36.14**	5.72	33.1	**37,57**	41,95	6,5
No PELL (n=39)	**96.6**	23,33	544	**41,53**	11,67	136	**30.28**	9.67	96.3	**24,77**	61,18	7,8
*p <0.05			**0.04***			**0.31**			**0.06**			**0,00***

In Table (7) above we see statistically significant differences in CQ and BEH of PELL students with a study abroad experience versus those studying abroad with no PELL.

TABLE (8): CQ OF IB STUDENTS WHO DID NOT STUDIED ABROAD, WITH/WITHOUT PELL ELIGIBILITY

NO STUDY ABROAD	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
PELL (n=7)	81.34	6.48	870	32.38	10.12	103	28,5	11,78	139	19,13	11,67	136
No PELL (n=151)	83.23	7.82	491	34.54	10.87	118	27,99	9,77	96	20,2	6,91	151
*p <0.05			0.41			0.29			0,42			0,34

If we compare PELL students without study abroad experience with non-PELL students, also without that experience (Table 8) we do not find statistically significant differences.

TABLE (9): CQ OF IB STUDENTS WITHOUT A SECOND LANGUAGE, WITH/WITHOUT PELL ELIGIBILITY

NO 2nd LANG	CQ Mean	St Dev.	Var.	CST Mean	St Dev.	Var.	MOT Mean	St Dev.	Var.	BEH Mean	St Dev.	Var.
PELL (n=11)	89,45	13,48	888	36	11,14	124,2	30,27	11,41	123,2	22,64	11,64	135,7
No PELL (n=151)	82,42	29,8	524	35,13	11,41	130,3	35,13	11,1	130,3	20,26	6,94	48,2
*p <0.05			0,17			0,4			0,09			0,15

Also, we found no differences between PELL and non-PELL students without a second language, and we found no statistically significant differences. We did not analyze those with a second language (n=3) due to the very small sample size.

Therefore, we confirm PELL students develop more cultural intelligence than non-Pell students when having a study abroad experience and this is not associated with the relative increased number of PELL students studying abroad versus non-Pell students.

Discussion and Conclusions

The present business world is global: 44% of sales of the S&P 500 companies are international (The Economist, 2019). The global economy has created a more complex and dynamic environment in which firms must compete effectively to achieve sustainable growth (Caligiuri, 2006). Developing managers with a global mind-set and cultural intelligence who can work or lead in multicultural teams has become a major challenge for international corporations (Caligiuri, 2013; Javidan & Teagarden, 2011). There is a 40% of expatriate assignment failure in developed nations and up to 70% in developing countries (Anderson, 2003); this is increasing and expected to continue (EY, 2013) with a cost up to 750,000USD per expatriate (Hill & Hunt, 2018). The ability to interact effectively across cultures, or *intercultural competence*, is of paramount importance for success in today's global business environments (Johnson et al.,

2006). Corporations need young people who work effectively with others and understand and respect differences—not just in our country—but around the world (Wagner, 2008). We need to develop International Business students that have the skills needed in today's global environment and therefore we need to evaluate them and develop the skills and competences required.

TABLE (10): SUMMARY OF CQ VALUES AMONG THE DIFFERENT SUB-GROUPS OF BUSINESS STUDENTS

	CQ Mean	St Dev.	Var.	**CST Mean**	St Dev.	Var.	**MOT Mean**	St Dev.	Var.	**BEH Mean**	St Dev.	Var.
Study Abroad N=40	**97.05**	23.57	555	**40.45**	11.30	128	30.85	9.75	95	25.75	8.68	75
Second Lang. (n=37)	95.84	20.91	437	38.41	10.12	102	30.92	10.05	101	**26.11**	8.96	80
IB Mayor (n=24)	**102.04**	17.47	305	39.25	10.98	121	**33.67**	7.95	63	**28.29**	7.99	64
Honors (N=31)	76.81	26.89	723	32.71	12.01	144	29.45	10.23	105	17.81	8.09	63.36
PELL (n=14)	95.21	28.88	834	37	12.36	53	**31.64**	10.19	104	25.79	12.6	159
Men (n=98)	84.14	22.00	485	35.58	10.63	112.97	27.95	9.95	98.94	21.32	7.44	55.43
Women (N=90)	85.71	23.21	538	35.21	11.30	128.95	28.72	9.66	93.39	21.51	8.23	67.68
Undergrad (n=166)	84.96	23.44	550	35.06	10.79	116	28.89	9.84	97	21.38	8.37	70.07
Graduate MBA (n=22)	93.54	21.37	457	**43.5**	12.10	146	29.45	10.23	105	24.14	4.94	24.41

Table (10) above summarizes the values of the four factors of cultural intelligence of the different groups of students analyzed. We can see the highest values in CQ are from IB students (102.04) followed by those studying abroad (97.05) and PELL students (95.21). On the other hand, on Cultural Strategic Thinking (CST) the higher values are those of MBA students (43.50) and those who studied abroad (40.45) and IB major (39.25). In Motivational intelligence (MOT) the highest values are those of IB students (33.67) and PELL (31.64) and those speaking a second language (30.92). Finally, in Behavioral Cultural Intelligence (BEH) the highest values are again those of IB students (28.29), those speaking a second language (26.11) and PELL (25.79). These results suggest that studying International Business and having a study abroad experience help to have higher Cultural intelligence and it could help to improve being more effective in global business environments. On the other hand, the results regarding PELL Students open a new door to evaluate the significance of students facing some challenges and the impact in CQ, although, as indicated above, their higher values could be due to the fact of a higher participation in study abroad programs versus the total sample evaluated.

Cultural Intelligence is rightly considered an "inexorable" requirement (Goh, 2012, p. 1) of today's world as it is of paramount importance to develop culturally intelligent citizens for any globalized nation's development. Integrating CQ in school curriculum through academic curriculum, classroom activities and reward structures may serve an imperative approach to develop a sense of global citizenship in students (Goh, 2012). The main implication of this review and study is that we do have to include International Business topics and

courses and study abroad experiences among business students if we want them to have better Cultural Intelligence in order to be better business executives dealing with the increasingly cultural challenge of the complex, continuously changing an interdependent business world. Also, that underserved students benefits more from their study abroad experience in terms of developing cultural intelligence

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