

## Cultural Intelligence among Jordanian University Students

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### ABSTRACT

The current study aimed to identify the level of cultural intelligence of a sample of Jordanian university students, and to explore differences in cultural intelligence due to the variations in gender, study specialization, and place of residence. The sample of the study consisted of 366 male and female students selected from a Jordanian university. To achieve the objectives of this descriptive study, a tool was developed to measure cultural intelligence which consisted of 30 items, and was verified in terms of validity and reliability. The results of the study showed that the level of cultural intelligence was moderate on the overall scores and its domains. There were no statistically significant differences in cultural intelligence overall scores due to gender, study specialization, and place of residence. However, there were significant differences in the emotional domain due to gender in favor of females, and in cognitive domain due to students' specialization in favor of scientific specialization.

Keywords: Cultural intelligence, Jordanian University students

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### INTRODUCTION

Gardner (1993) identified seven distinct intelligences that emerged from his research and that students learn, behave, and understand in different ways according to their specific abilities. Gardner stated that we are able to know the world through language, logical-mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems, understanding of other individuals (socially and emotionally), and understanding of ourselves.

Since intelligence is one of the main factors that explain individual differences and plays a major role in the educational and learning processes, Christopher Earley and Soon Ang were the first to introduce this concept in their book "*Cultural Intelligence: Individual Interactions Across Cultures*" published in 2003. The concept was developed furthered by David Livermore in the book, "*Leading with Cultural Intelligence*" which was published in 2012. The concept of cultural Intelligence and cultural quotient (CQ) are used now widely in business, education, government and academic research (Alias, 2013).

The term cultural intelligence was defined as a person's capability to adapt as s/he interacts with others from different cultural regions, and has behavioral, motivational, and metacognitive aspects (Earley and Ang, 2003; Thomas, 2006). Cultural intelligence refers to the ability to work effectively with people from other cultures and move toward actions rather than willingness (Livermore, 2009).

Tan (2004) indicated an additional meaning to cultural intelligence. It includes the ability to implement knowledge and information that individuals have previously learned from other cultures and adjust to problems they face based on experiences from other cultures.

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Cultural intelligence has three components. The first is the cognitive component, which represents the individual ability to understand similarities and differences between cultures through the use of the cross-cultural knowledge about religion, economy, social norms, and language (Shannon & Begley, 2008). The second is the emotional/ motivational component which reflects the ability of the individual to understand other cultures emotions and thoughts, and adjusting to such ideas (Templer, Tay & Chandrasekar, 2006). The third is the behavioral component which reflects the individual ability to adjust his\her verbal and nonverbal behaviors to tune in accurately with other cultures in similar or diverse situations (Tampler, et al., 2006).

Sternberg added a fourth component to cultural intelligence which was a strategic component stemming from metacognitive thinking. It reflects the ability to control perception and understanding of other cultures and the ability to use cognitive processes in order to understand what is going around the individual when presented with a situation from another culture (Ward, Fischer, Lam, and Hall, 2009).

Thomas (2006) indicated that cultural intelligence is similar to other types of intelligence in terms of development over time. It may develop slowly but rich environmental experiences may help speed this development. Thomas identified five stages of cultural development. First, interaction with external situations in foreign cultures. Second, recognizing cultural norms of other cultures. Third, accepting other cultures norms and diversity. Fourth, comprehending various cultural rules in alternative behaviors similar to other cultures. Fifth, making initiatives toward new situations within the same context as in other cultures.

## **LITERATURE REVIEW**

Cultural intelligence is related to many psychological and social factors. It is positively correlated to cultural adjustment (Lawrence, 2011), Social adjustment (Ward and Fischer, 2008), adjusted behaviors to other cultures (Oolders, Chernyshenko & Stark, 2008; Flaspolder, 2007), decision making abilities (Imai, 2007), emotional stability (Ang, Dyne & Kah, 2005), and social tolerance (Alias, 2013).

Cultural intelligence was related to leadership. Chin and Gayneir (2006) found that leadership in the 21<sup>st</sup> century requires high levels of cultural intelligence. Also, Tuleja (2014) found that cultural intelligence can be developed through training students to increase their level of mindfulness and became more reflective, and as a result they become more culturally sensitive to other cultures.

Studies also have shown a relationship between cultural intelligence and emotional and social intelligence (Kim, Kirkman & Chen, 2008; Imai 2007).

Ramirez (2010) found that cultural intelligence levels predict the appropriate conflict resolution strategy adaption of students.

Cultural intelligence is influenced by learning a foreign language and international exchange programs. Baez (2014) and Khodadady and Yazdi (2014) showed that students who learned a second language showed better levels of cultural intelligence in comparison to those who did not learn a second language.

Studies examining the differences in cultural intelligence among university students due to gender and specialization have not reached conclusive results. Mazzurco, Jesiek & Ramane (2012) showed significant differences in favor of engineering students and no gender differences. While Baez (2014) found significant differences in favor of female students.

No studies have addressed the level of cultural intelligence among Jordanian university students. Several studies addressed the level of cultural intelligence among university students in the region. Al-Hasnawai and Aeid (2010), Khodadady & Ghahari (2011) and Al-Shahrani (2012) in studies conducted in Iraq, Iran and Kingdom of Saudi Arabia, in order, found that university students showed a moderate level of cultural intelligence. Alias (2013) found a higher level of cultural intelligence among teachers in the Kingdom of Saudi Arabia whose average was about 70%.

### *Statement of the Problem*

Living in this globalized world requires each one of us to adapt to global values and show tolerance and mobility to others' culture, religion, customs, and values. Nearly all people have the opportunity to interact directly or indirectly through communication systems with people from other cultures, but the increased opportunities for international interaction on one hand, and the intolerance that faces the world on the other hand, cultural diversity can either create a conflict or collaboration. Therefore, the issue of cultural intelligence among students in particular must be dealt with and enhanced because students success in today's world

requires their ability to adapt to a series of cultural challenges and prepare themselves to the outside changing and diverse world after graduation (Al-Hasnawai and Aeidi, 2010; Khodadady & Ghahari, 2011; Al-Shahrani, 2012)

The present study attempted to explore the level of cultural intelligence among Jordanian university students and explore the effect of gender, place of residence, and study specialization on cultural intelligence.

The present study attempted to answer the following questions:

1. What is the level of cultural intelligence among Jordanian university students?
2. Are there any statistically significant differences in cultural intelligence due to gender, study specialization, and place of residence?

#### *Significance of the Study*

The theoretical importance of the present study stemmed from the lack of research on cultural intelligence on Jordanian samples in general and university students in specific. This concept affects students abilities in adapting to market place or interacting with others from different cultures since Jordan is considered as one of the few open and tolerant countries in the region. Hopefully, this study will bring more attention to other researchers in Jordan and the region to focus on this concept and explore its relations to other psychological and social factors.

The results of the present study could be of a practical importance since the results can raise the awareness of the Jordanian universities to pay more attention to this concept in their curricula and activities.

#### *Study Terms:*

**Cultural intelligence:** The individual capabilities to deal effectively with cultural situations in their environment. Operationally, it will be measured by the scores achieved through the scale developed for this purpose.

**Gender:** Males or females.

**Study Specialization:** Students were divided into two groups: Humanities and basic Sciences.

**Place of residence:** City or town.

## **METHODOLOGY**

**Research Resign:** the present study followed the survey descriptive method procedures to collect data on cultural intelligence among university students.

**Population:** The population consisted of (3600) undergraduate university students in north Jordan.

**Sample:** The sample of the study consisted of (366) undergraduate students (233 males and 133 females). The sample was selected randomly from different general university requirement courses. The sample was distributed based on gender, place of residence, and specialization as shown in table 1.

TABLE 1

Distribution of Sample Based on Gender, Place of Residence and Specialization

Gender	Specialization	Place of Resident		
		City	Town	Overall
Males	Basic Sciences	59	34	93
	Humanities	95	45	140
	Overall	154	79	233
Females	Basic Sciences	29	23	52
	Humanities	45	36	81
	Overall	74	59	133
Overall		228	138	366

**Study Instrument:** To achieve the objectives of the study, a scale that measured cultural intelligence was developed after the researchers had reviewed a number of available scales in English and Arabic (Ang, et al., 2007; Ahmad, 2012; Al-Shahrani, 2012; Nikpour, Shahrakipour, Karimzadeh, 2013).

The researchers adapted the three domains of cultural intelligence (cognitive, emotional, and behavioral). Also, 38 positive items were written for the three domains, with a 5-point Likert-Type responses that range from strongly agree to strongly disagree.

Validity was conducted through content validity and construct validity. Ten psychologists were asked to judge the proposed scale based on objectives, language, and clarity. Based on this, 3 items were omitted and 5 items were modified in terms of language. For construct validity, a sample of 58 Jordanian students took the proposed scale, and correlations were calculated between items scores and domains scores, and between item scores and overall scores. Five items were omitted because their correlations were less than (.25).

Reliability was also conducted by two methods. First, test-re-test procedures were done using the validity sample and the correlation for the whole scale was (.81) and for the domains (.81, .83, & .75). Second, a Cronbach Alpha was calculated using the validity sample and Alpha values for the whole scale was (.92) and for the domains were (.91, .90, & .88).

The total number of items that passed the validity and reliability procedures were 30 items (11 cognitive, 9 emotional, and 10 behavioral). Range of scores for the whole scale was 30-150. The following norm was adapted to judge the level of cultural intelligence: mean scores from 1-2.33 were considered low cultural intelligence, mean scores from 2.34-3.66 were considered moderate cultural intelligence, and mean scores from 3.67-5 were considered high cultural intelligence.

**Study instruction:** In order to achieve the objective of the study, researchers developed a scale to measure cultural intelligence and obtained indicators for its validity and reliability. Then the scale was administered to a sample of students at a Jordanian university after explaining the objectives of the study and methods of responding to the scale items. Data was analyzed after omitting uncompleted scales.

## RESULTS

To answer the first question regarding the level of cultural intelligence among Jordanian university students, means and standard deviations were calculated for the overall score and the three domains as shown in table 2.

TABLE 2  
Means and Standard Deviations for Cultural Intelligence

Domains	Mean Value	SD	Level
Cognitive	3.26	0.65	Moderate
Emotional	3.55	0.62	Moderate
Behavioral	3.06	0.72	Moderate
Overall	3.28	0.55	Moderate

Results of table 2 showed that the overall mean score for cultural intelligence was (3.28) with a Standard deviation of (.55), which reflected a moderate level of cultural intelligence among Jordanian university students. Also, the mean scores for the cognitive, emotional, and behavioral domains were (3.26, 3.55, & 3.06) in order and the standard deviations were (.65, .62, & .72) in order. The domain means also reflected a moderate level of cultural intelligence. It is worth noting that emotional dimension of cultural intelligence had the highest mean which represented a high moderate level of cultural intelligence.

To answer the second question regarding the possible significant differences in cultural intelligence among Jordanian university students due to gender, study specialization, and place of residence, means and standard deviations for cultural intelligence scores based on gender, study specialization, and place of residence were calculated as shown in table 3.

TABLE 3  
Means and Standard Deviations for Cultural Intelligence Scores Based on Gender, Study Specialization and Place of Residence

Gender	Specialization	Place of residence	Means	SD
Males	Science	City	3.34	0.40
		Town	3.14	0.46
		Overall	3.27	0.43
	Humanities	City	3.28	0.57
		Town	3.15	0.62
		Overall	3.24	0.59
Overall		City	3.31	0.51

		Town	3.15	0.56
		Overall	3.25	0.53
Females	Science	City	3.54	0.70
		Town	3.37	0.45
		Overall	3.47	0.60
	Humanities	City	3.16	0.48
		Town	3.31	0.56
		Overall	3.23	0.52
	Overall	City	3.31	0.60
		Town	3.33	0.52
		Overall	3.32	0.56
Overall	Science	City	3.41	0.52
		Town	3.23	0.47
		Overall	3.34	0.51
	Humanities	City	3.25	0.55
		Town	3.22	0.60
		Overall	3.24	0.56
	Overall	City	3.31	0.54
		Town	3.13	0.55
		Overall	3.28	0.54

Results of table 3 showed some apparent differences in cultural intelligence scores based on variations in gender, specialization, and place of residence. To examine the significance of these differences, a 3-way analysis of variance was used as shown in table 4.

TABLE 4  
Results of the Effect of Gender, Specialization and Place of Residence on Cultural Intelligence

Source of Variance	SS	DF	F	P
Gender	0.52	1	1.76	0.18
Specialization	0.97	1	3.28	0.07
Place of Residence	0.73	1	2.46	0.11
Error	107.82	362		
Total	109.88	365		

Results in table 4 showed no statistical differences in cultural intelligence scores due to gender ( $F=1.76$ ,  $P=.18$ ), specialization ( $F= 3.28$ ,  $P = .07$ ), and place of residence ( $F = 2.46$ ,  $P = .11$ ). Since there were no significant differences in overall cultural intelligence, the researchers investigated the effect of gender, specialization, and place of residence on domains of cultural intelligence. The means and standard deviations of cultural intelligence domains based on gender, specialization, and place of residence are displayed in table 5.

TABLE 5  
Means and Standard Deviations of Cultural Intelligence Domains Based on Gender, Specialization and Place of Residence

Gender	Specialization	Place of residence	Cognitive		Emotional		Behavioral	
			Means	SD	Means	SD	Means	SD
Males	Sciences	City	3.26	0.47	3.55	0.55	3.13	0.59
		Town	3.11	0.55	3.39	0.53	2.96	0.68
		Overall	3.27	0.51	3.49	0.55	3.07	0.62
	Humanities	City	3.27	0.65	3.48	0.63	3.12	0.73
		Town	3.11	0.80	3.48	0.65	2.90	0.81
		Overall	3.22	0.71	3.48	0.64	3.05	0.76
	Overall	City	3.30	0.59	3.51	0.60	3.13	0.68
		Town	3.11	0.70	3.44	0.60	2.93	0.75
		Overall	3.24	0.63	3.48	0.60	3.06	0.71
Females	Sciences	City	3.52	0.64	3.79	0.74	3.34	0.99
		Town	3.50	0.56	3.57	0.56	3.05	0.57
		Overall	3.51	0.60	3.69	0.67	3.21	0.84

	Humanities	City	3.50	0.69	3.61	0.53	2.90	0.55	
		Town	3.27	0.57	3.67	0.69	3.02	0.71	
		Overall	3.15	0.65	3.64	0.60	2.95	0.62	
Overall		City	3.23	0.71	3.68	0.62	3.07	0.78	
		Town	3.36	0.57	3.63	0.64	3.03	0.65	
		Overall	3.29	0.65	3.66	0.63	3.05	0.72	
Overall	Sciences	City	3.41	0.53	3.63	0.63	3.20	0.75	
		Town	3.26	0.58	3.46	0.54	3.00	0.63	
		Overall	3.35	0.56	3.56	0.60	3.12	0.71	
	Humanities	City	3.20	0.67	3.52	0.60	3.05	0.68	
		Town	3.18	0.71	3.56	0.67	2.95	0.76	
		Overall	3.19	0.68	3.54	0.63	3.00	0.71	
	Overall		City	3.28	0.63	3.56	0.61	3.11	0.71
			Town	3.22	0.66	3.52	0.62	2.97	0.71
			Overall	3.26	0.64	3.55	0.62	3.06	0.71

Results of table 5 showed some apparent differences in cultural intelligence domain scores based on variations in gender, specialization, and place of residence. To examine the significance of these differences, a 3-way Manova was used as shown in table 6.

TABLE 6  
Results of the Effect of Gender, Specialization and Place of Residence on Cultural Intelligence Domains

Independent Variables	Dependent Variables	SS	Df	F	P
Gender	Cognitive	0.29	1	0.72	0.39
	Emotional	2.71	1	7.13	*0.00
	Behavioral	0.01	1	0.01	0.89
Specialization	Cognitive	2.37	1	5.79	*0.01
	Emotional	0.06	1	0.17	0.67
	Behavioral	1.07	1	2.10	0.14
Place of Residence	Cognitive	0.47	1	1.15	0.28
	Emotional	0.30	1	0.80	0.37
	Behavioral	1.72	1	3.37	0.06
Error	Cognitive	148.64	362		
	Emotional	137.85	362		
	Behavioral	185.13	362		
Total	Cognitive	151.65	365		
	Emotional	140.77	365		
	Behavioral	187.86	365		

\* Significant at ( $\alpha=0.05$ )

Results of table 6 showed a significant effect of gender on emotional domain ( $F = 7.13, p = .00$ ) in favor of female students as shown in table 6. Also, there is a significant effect of students specialization on cognitive domain ( $F = 5.79, p = .01$ ) in favor of scientific majors. All other differences were not significant.

## DISCUSSION

Results of the first question regarding the level of cultural intelligence among Jordanian university students revealed that students showed a moderate level of cultural intelligence in both the overall scores and all the domains scores.

The researchers attributed these findings to the incomplete cycle of growth development in cultural intelligence. Thomas (2006) stated that cultural intelligence growth is similar to that of other types of intelligence and it requires time and new experiences in life to develop fully. Also, Khadadady & Ghahari (2011) found a support for this explanation when they found that graduate students had a higher cultural intelligence than undergraduate students.

In spite of the fact that Jordan is an open culture to other countries with high media and social communication means, and Jordan has received a lot of refugees from countries around it due to the unstable situation in the Middle East. Researchers feel that Jordanian university students still need more experience and exposures to

other cultures in order to form more positive attitudes and emotions toward people from different cultures. Jordanian universities need to put more effort on students exchange with other European and Western countries. Also, Jordanian curricula in high schools and universities should give more attention to internationalization values and ideas. Therefore, a new European TEMPUS project that put five European universities along with five Jordanian universities to work together toward enhancing internationalization in Jordanian universities for the period 2013-2016.

Results of the present study compliment the findings of similar studies in the region. Al-Hasnawai and Aeid (2010), Khodadady & Ghahari (2011), and Al-Shahrani (2012) found that university students showed a moderate level of cultural intelligence in Iraq, Iran, and KSA.

Results of the second question regarding the differences in cultural intelligence due to gender, specialization, and place of residence revealed a small margin of differences. In reference to gender, results showed no statistical differences in cultural intelligence due to gender in the overall scores and in the cognitive and behavioral domain scores, but there was statistical differences in the emotional domain of cultural intelligence in favor of females.

Females seem to possess more emotions in their beliefs and attitudes toward others in general and people from other cultures. Jordanian females are well known for showing better emotional sensitivity and understanding of others than males. Females, in general, seem to have better emotional intelligence levels than males (King, 1999; Alhanani, 2002). Almomani (2010) in a local study among Jordanian students, supported this notion too Khodadady & Ghahari (2011) results actually supported the present findings and showed that gender differences among university students only exist in the emotional domain in favor of females, while Baez (2014) found significant differences in general cultural intelligence in favor of female students. However, Al-Shahrani (2012) and Mazzurco, Jesiek & Ramane (2012) found no differences between males and females in the overall scores and in all domains.

Also, results showed no statistical differences in cultural intelligence overall scores and the emotional and behavioral domain scores due to the specialization of the students, while there was a significant difference in the scores of the cognitive domain in favor of scientific specialization students.

The difference in cognitive cultural intelligence in favor of scientific majors could be explained in terms of general intelligence levels since scientific majors are normally high achievers and tend to have higher IQs (Ryan, 2007; Abdolqader and Abo-Hashim, 2007). This finding was partially supported by Khodadady & Ghahari (2011) who found that engineering students are better in cultural intelligence in general than humanities and arts students.

Finally, results showed that there were no statistical differences in cultural intelligence overall scores and in all domains scores due to place of residence. These results suggest that Jordanian cities and towns do not vary in terms of social communications skills and attitudes toward internationalization and cultural differences. This could be the case since the availability of media and communication means do not vary across Jordanian cities and towns. These findings contradict with Khodadady & Ghahari (2011) finding that students in towns had better cultural intelligence than students living in cities in Iran.

**Recommendations:** Jordanian high schools and universities must reevaluate and improve their internationalization values in their curricula and activities, and provide students with more opportunities to communicate with individuals from other countries such as exchange programs. Also, researchers should develop cognitive training programs to enhance university students' cultural intelligence.

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