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The relationship between cultural intelligence and group effectiveness in Mobarakeh steel company

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Today's environment creates a growing way for organizations to perform their functions through teams and groups. Organizations want to hire individuals who can perform better in groups and frequently adjust with people from various cultures and handle intercultural communications. People need to know other cultures and interact with people from other cultures. Consequently, they need cultural intelligence. The purpose of this study is to investigate the relationship between cultural intelligence and its facets with group effectiveness in Mobarakeh Steel Company. Forty Seven teams participated in this study. According to the results, cultural intelligence and its facets (metacognition, cognition, motivation and behavior) have significant and straight relationship with group effectiveness. Also, motivation and behavior facets can predict group effectiveness.

Key words: Group, group effectiveness, cultural differences, cultural intelligence.

INTRODUCTION

Unawareness about properties and orientations of own culture, sense of fear and peril in interacting with people from other cultures, inability to understand and explain behavior of people from different culture, misapprehend-sion effect of culture on behavior and inability to adjust with other's work and life increase tension and stress. Consequently, these factors cause incorrect performance and lost opportunities (Thomas and Inkson, 2004).

It is derived from the Latin word "cultura", the word 'culture' means to cultivate (Harper, 2001). Values, customs, artifacts, behaviors and beliefs are derive from culture. Therefore, people's cultural perceptions are different. These differences cause various and heterogeneous behaviors (Tousi, 1993).

Getting people to work together, to listen to every member, to consider all view points and to exercise courtesy and respect for each other has always been a challenge. In today's society, when cultural diversity is common in workplaces, good communication has become an even greater challenge (Lankard, 1994). Staffs from varied cultures reflect different learning styles and bring different preferred working styles to their jobs. Sometimes, managers consider such differences wrong or problematic but, recognizing, valuing and supporting these and other differences can maximize the productivity of everyone in the workplace (Bibikova and Kotelnikov, 2006).

The ability to adapt successfully to the new specific cultural values is determined by the person's culture intelligence (CI). Work groups should develop cultural intelligence to perform effectively (Thomas and Inkson, 2004).

Some aspects of culture are easy to see, like art, music and behavior. However, the significant and most challenging parts of other cultures are hidden. These might include our beliefs, values, expectations, attitudes, and assumptions. Our cultural programming in these areas shapes everything we do. Most importantly they help us to decide what is 'normal' in our eyes. It is the perceived deviation by other cultures from our version of normality that causes the problems (Bibikova and Kotelnikov, 2006).

In the most systematic treatment of cultural intelligence to date, Earley and Ang (2003) defined cultural intelligence as "a person's capability to adapt effectively to new cultural contexts". This definition is consistent with Schmidt and Hunter's definition (2000) of general

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intelligence as 'the ability to grasp and reason correctly with concepts and solve problems (Earley and Ang, 2003). Ang et al. (2004) defined cultural intelligence as "an individual's capability to deal effectively in situations characterized by cultural diversity" (Imai, 2007).

Cultural intelligence is set to be in motion when individuals are able to analyze the new culture and accept that other individuals from a different culture may perceive a situation differently. However, adjustment is likely to happen only when the employee understands the reasons behind each value or rule within the new culture and is conscious of the meaning of the novel behavior (Earley et al., 2006).

Early and Mosakowski (2004) developed a multidimensional construct (CQ) to measure cultural intelligence based on the emotional and social quotient of employees. This scale is comprised of four facets: Strategy or metacognition CQ that is an individual acquires and understand cultural knowledge through processes and manners he/she employs. Motivation CQ is the individual's interest with new and different cultures. He/she is directed by his/her energy to interact with people from the other cultural environment. Behavior CQ is the individual's ability to control his/her verbal and nonverbal behavior when adapting to different cultures. The person's behavior should be flexible enough in order to respond appropriately to the different cultural situations (Van Dyne and Ang, 2005). Knowledge or cognition CQ is the person's awareness and understanding of his/her culture and that of others (Thomas and Inkson, 2004). According to Thomas (2006), the importance of learning about your own culture and that of others leads to the ability to understand and decode your personal behavior and other's behavior (Lane et al., 2000).

Cultural intelligence will help individuals manage effectively cultural differences, in particular, Lower the cultural barriers and predict what 'people' are thinking and how they will react to other's behavior patterns and harness the power of cultural diversity.

In today's organization, cultural intelligence is a necessary tool for every manager who deals with diverse teams of employees, customers, partners, competitors, government, and other business players (Bibikova and Kotelnikov, 2006).

When individuals work in a group, they should know that every member has different culture. This is important for managers to know how people from different cultural background can work together. Experts believe that member's of group need an important ability to perform effectively in group that is called cultural intelligence.

Groups in organizations became a focal point of interest in the 1940s (Cantu, 2007). A "work group" is made up of individuals who see themselves and who are seen by others as a social entity, who are interdependent because of the tasks they perform as members of a group, who are embedded in one or more larger social systems (for example community and organization) and

who perform tasks that affect others (such as customers or coworkers) (Alderfer, 1977; Hackman, 1987). According to group definition, group members must deal with people from different cultures and they should have knowledge about cultural differences. Thus, they need cultural intelligence.

A core element in evaluating and measuring groups is effectiveness. The 1998 Advanced Learner's Oxford dictionary defines effectiveness as: "Having the desired effect; producing the intended result, making a strong and pleasing impression" (Scott and Pollok, 2006). An effective group has certain characteristics, clear and shared goals, participation, respected feelings, consensus decision making, share leadership, trust, recognizing group problems and creativity (Schein, 1988).

MATERIALS AND METHODS

The aim of this research was to investigate the relationship between the different facets of cultural intelligence and group effectiveness.

For this investigation, a three part questionnaire was designed. The first part consisted of the revised four factor model of CQ developed by Ang et al. (2007). This instrument included 24 statements designed to measure the four facets of cultural intelligence that is strategic or Metacognition, motivation, behavior and knowledge or cognition CQ. This part was measured using a 5 point Likert scale type from 1=SD to 5=SA. The second part included 8 questions intended to measure group effectiveness adapted from Schein (1988). This part was measured using a 10 point scale type from 1=bad to 10=good. The third part, collected demographic data and asked about gender, age, education and work experience.

The survey took place between the months of September 2009 and April 2010. Participants were employees working in Multicultural teams in Mobarakeh Steel Company. Out of 307 distributed questionnaires among 47 teams, 242 questionnaires from 44 teams were received. The sample consisted of 2.5% females and 97.5% males, 23.1% less than 30 years old, 24.4%, 31 to 40 years old, 48.3%, 41 to 50 years old and 4.1% more than 51 years old, respectively. 51.2, 14.5, 27.7 and 6.6% have diploma, junior degree, bachelor and post graduated. 36.8, 13.6 and 49.6% have respectively less than 10 years, 10 to 20 years and more than 21 years of experience. We then coded the generated data and used the computerized software SPSS 14.0 for analysis. The reliability for the CQ questionnaire and group effectiveness questionnaire were satisfactory with Cronbach's Alpha of = 0.92 and 0.86.

RESULTS

Correlation analysis was used to test if a relationship existed between the independent variables: CQ and its facets with the dependent variable: Group effectiveness. The Pearson correlation coefficients among the variables showed a significant relation between cultural intelligence and group effectiveness ($P<0.01$, $r=0.579$). In addition there was significant relationship between the facets of cultural intelligence and group effectiveness ($P<0.05$,

Table 1. Correlation of facets of CQ and group effectiveness.

Facets of CQ	Pearson coefficient	Sig (2-tailed)	R^2
Metacognitive CQ	0.375	0.012*	0.14
Cognitive CQ	0.404	0.007**	0.16
Motivational CQ	0.502	0.001**	0.25
Behavioral CQ	0.483	0.001**	0.23

**Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05 level.

Table 2. Stepwise multiple correlation.

Model	R	R Square	Adjusted R square	Std. error of the estimate	F	Sig.
1	0.502[a]	0.252	0.234	7.2522	14.113	0.001[a]
2	0.577[b]	0.333	0.301	6.9268	10.254	0.000[b]

[a]Predictors: (constant), motivation, [b] Predictors: (constant), motivation, behavior.

Table 3. Stepwise multiple linear regression.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	14.029	10.303		1.362	0.181
	Motivation	2.248	0.598	0.502	3.757	0.001
2	Constant	11.341	9.914		1.144	0.259
	Motivation	1.595	0.641	0.356	2.486	0.017
	Behavior	0.972	0.433	0.321	2.245	0.030

r=0.375 for metacognitive, r=0.404 for cognitive, r=0.502 for motivational and r=0.483 for behavioral CQ). The coefficient of determination [R.sup.2] was 0.14 for Metacognitive, 0.16 for cognitive, 0.25 for motivational and 0.23 for behavioral (shown in Table 1). This means that 14, 16, 25 and 23% of the variation in the independent variables are explained by the variations in the dependent variable. Stepwise multiple linear regression was used to provide a linear model for predicting group effectiveness. The Unstandardized coefficient B of motivational and behavioral CQ indicated that these facets can predict group effectiveness (shown in Tables 2 and 3). According to Tables 2 and 3, linear relationship between cultural intelligence facets and group effectiveness is:

Group effectiveness= 1.59 Motivation + 0.972 Behavior

(1)

DISCUSSION

This research set out to investigate the relationship between the different facets of cultural intelligence and group effectiveness. Our findings demonstrated that (1) cultural intelligence and its facets were positively related

to group effectiveness; (2) two facets of CQ can be considered as predictors of group effectiveness that is, motivational and behavioral CQs.

Our results indicated that cultural intelligence was positively related to group effectiveness (Hadizadeh and Hoseini, 2008; Imai, 2007). Individuals high in CQ are better equipped with the metacognitive, cognitive, motivational and behavioral skills necessary in overcoming cultural barriers such as clashing schemas and metaphors. Also, they will be able to solve problems (Imai, 2007). With CQ, individuals can be aware of their beliefs and values, reduce conflicts derived from differences and participate to goal setting. Therefore, CQ is a means of growing group and conquering group problems.

Our results indicated that metacognitive CQ was positively related to group effectiveness (Ang et al., 2007). Consequently, Individuals can understand cultural differences and help to improve group performance. Those with high metacognitive CQ are consciously aware of other's cultural preferences before and during interactions. They also question cultural assumptions and adjust their mental models during and after interactions (Triandis, 2006).

Cognitive CQ was also positively related to group

effectiveness (Hadizadeh and Hoseini, 2008). This facet refers to skills of general thoughts and uses for identifying actions in new settings. In addition, it includes individual beliefs and values, methods and procedures that others use for doing their functions. Many people are not able to understand other cultures, but one who is powerful in cognitive CQ, finds shared concepts earlier. Learning other's cultural concepts help to understand and recognize other's behavior.

Motivational CQ was also positively related to group effectiveness (Hadizadeh and Hoseini, 2008). The motivational CQ refers to one's self motivation and commitment to adapt and adjust to a different culture. So, individuals have capability to direct attention and energy toward learning about and functioning in situations characterized by cultural differences. Kanfer and Heggestad (1997) argued that such motivational capacities provide agentic control of affect, cognition and behavior that facilitate goal accomplishment.

Behavioral CQ was also positively related to group effectiveness (Ang et al., 2007; Hadizadeh and Hoseini, 2008). So individuals with high behavioral CQ display suitable verbal and nonverbal behaviors when interacting with individuals from the unfamiliar culture (Van Dyne and Ang, 2005). They have a flexible repertoire of behavioral responses that enhances their task performance in culturally diverse settings.

Also, our findings demonstrated that among four facet of CQ, motivational and behavioral CQ can respectively predict group effectiveness with 1.59 and 0.972 coefficients. Thus, in effective groups, knowledge and mental process should have used for interacting and communicating with others and their members have sufficient motivation to communicate. Also, group members' behavior is adapted with situations. Having interest to know other cultures and ability to control behavior and be flexible when dealing with different cultures is basis of group effectiveness.

Conclusion

Our findings indicated that cultural intelligence and its facets have significant and straight relationship with group effectiveness. Motivational and behavioral CQ can predict group effectiveness. Having the necessary attitude towards exerting effort is the basis for developing the necessary skills and behaviors to effectively interact with people with different social backgrounds. This study indicated that metacognitive and cognitive CQ can't predict group effectiveness.

Our findings are limited to studied organization's teams and cannot be generalized to other teams in other organizations. However, this study did not take into account demographic characters of groups. It is recommended that further studies including such variables be undertaken.

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