

TRANSFORMING LEADERS THROUGH CULTURAL INTELLIGENCE

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ABSTRACT

Developing charismatic leaders in the 21st century must include fostering the cultural awareness skills for effectively managing employees from many new and unique backgrounds. The purpose of this quantitative study was to determine if there was a correlation between cultural intelligence (CI) and transformational leadership (TL) attributes of managers at American Fortune 500 companies. The data results indicated that there was a statistically significant positive relationship between the CI and the TL abilities of managers. The conclusion drawn from the findings provide new information to theory of cultures when CI and TL constructs are compared. It is recommended that American Fortune 500 leaders continue to strengthen culture-specific awareness's through educational and personal pursuits.

JEL: C14, C42, D78, E61, I21, J24, J50, J52, J71, M12, M21, N30

KEYWORDS: Cultural Intelligence, Transformational Leadership, Motivational, Inspirational, Charismatic, Employee Turn-over

INTRODUCTION

North American Fortune 500 companies continue to grow into microcosms of the diversity in society (Martelli & Abels, 2011). In the last decade, American businesses have undergone extensive immigration and human resource policy changes due to globalization (Merrifield, 2006). United States Department of Labor Statistics issued forecasts due to globalization that ethnic minorities and immigrants will increase over the next decade as compared to the white Anglo population percentage; Asian American (44%), Hispanic/Latin American (36%), African America (21%), and White (9%) increases.

To address the impacts of globalization, American companies have created hiring strategies that support the new diversity requirements in business, including outsourcing high-paid jobs while importing lower-waged workers, incorporating new communication methodologies, and adjusting to the new influxes of people from many distant places (Wallace & Figueroa, 2012). As an example, American Fortune 500 companies have increased the hiring of many people from foreign countries, resulting in a 33% increase in U.S. Citizenship and Immigration Services H-1B visa, form I-129, activity (Butler, 2012).

International cooperation in business has become increasingly important for effective American company leaders (Bass & Riggio, 2006) as they must operate within new diverse settings (Center for American Progress, 2009). This research extended the study done by Ng and Sears (2011) and Keung (2011), applied to different levels of managers in American Fortune 500 companies. Ng and Sears discovered that Chief Executive Officers in Canadian companies needed to strengthen their cultural intelligence skills in order to be effective and transform their workforces into inclusive, diverse environments.

The ongoing globalization processes involve intercultural training managers to be effective in the workplace, transforming societies and cultures through advances in economics, technology, and communications (Scherer & Palazzo, 2011). Leadership through the transformational paradigm compliments organizational performances with many meta-analyses (DeGroot, Kiker, & Cross, 2000). The purpose of this research was to determine if there is a relationship between the attributes of cultural intelligence (CI) and transformational leadership (TL) attributes of managers at American Fortune 500 Companies and what effect does these *interactions* have upon their abilities.

LITERATURE REVIEW

Leadership and Cultural Intelligence

The study of leadership comes in many forms of organizational behaviors and performance outcomes (Pauliené, 2012). Early leadership theorists attributed charismatic influences of leaders to the strength of their abilities (Weber, 1968). Leadership is an elusive construct, riddled with ambiguity, and difficult to study systematically (Nohria & Khurana, 2010). The study of intelligence includes areas in psychology, neurobiology, and behavioral genetics (Gottfredson & Saklofaké, 2009).

Twentieth century leadership involved complex behaviors and complex interconnected relationships in order to accomplish work (Baligh, 1994). One of the most controversial behaviors discussed within leadership literature is *intelligence* (Eysenck & Kamin, 1981). In essence, leadership intelligence exists in many forms and is developed mainly through experience and continued education (Sternberg, 2011). The requirement for intelligent managers to prepare organizations for the changes needed in the 21st century requires charismatic leadership skills operating in dynamic environments. Brown and Starkey (2000) called for continued explorations of the essential elements of modern leadership. Leadership attributes such as intelligence, education, sensitivity, hubris tendencies, and competence were the dominant themes for this research study (Riggio & Mumford, 2011).

This research furthered leadership paradigms for the 21st century by providing empirical data for leader potential analysis (Silzer, 2010), including cultural awareness understandings and influences. Leaders in the 20th century maintained an authoritative posturing over subordinates, believing that greater efficiencies came from different forms of stronger dominance (Bussel, 1997). Past leaders and managers had inclinations to assume ultimate power in positions of authority (McClelland, 1961). Leaders also made decisions based upon the scope of his or her knowledge and the contributions that the decisions made to the enterprises (Drucker, 1955, 2004). This psychological study of leaders and managers added to the general knowledge of human interactions (Maslow, 1966).

The cultural intelligence theory proposed by Ang, Van Dyne, and Koh (2006) was used to create the Cultural Intelligence Scale, CQS, as a self-awareness style of inventory to improve an individual's cultural awareness (Moshavl, Brown, & Dodd, 2003). The impact of cultural exposure is the awareness that generates the need to foster skills dealing with new people with unique customs coming from many unique places in the world (Hester, 2005). The contemporary American strategy of outsourcing work into foreign countries also drives the need for cross-culturally trained leadership, guiding multinational businesses spread across different continents (Kamann & van Nieulande, 2010). Sternberg (1977) proposed that intelligence was more than solving problems; it was also an analytical reasoning process. Sternberg explained that successful intelligence leads to the ability to cope during a work career and life. Sternberg (1996) added that people tend to judge intelligence by levels of academic achievement, which is measuring *inert* intelligence, defined as the inability to apply knowledge, which may not lead to realistic problem-solving.

This research study of managers provided a general grounding to improve the knowledge of human interactions. No preeminent theory has evolved from any contemporary research studies of the relationship between transformational leadership and cultural intelligence (Chin & Gaynier, 2006; Keung, 2011). Leadership learning of the culture of colleagues builds trust, breakdown communication barriers, and improves team efficiencies in American Fortune 500 companies (Thomas, Zolin, & Hartman, 2009). Identifying future leaders whom are transformational and culturally intelligent remains a critical task for all Fortune 500 companies in the 21st Century (Wilson & Mujtaba, 2010).

The relationship between leadership cultural intelligence and leadership transformational skills has been the subject of few research studies to date (Keung, 2011). Comparative research into organizational behavior has demonstrated that the softer skill areas of management are critical for the cultural intelligence growth necessary in the 21st century (Brungardt, 2011; Brungardt, Greenleaf, Brungardt, & Arensforf, 2006; Johnson, Lenartowicz, & Apud, 2006; Sawhney, 2008; Service, 2012). Earlier, Yukl (1999) postulated that there was much to be discovered about the underlying processes through which leaders influence follower attitudes, behaviors and motivation. Earley (1984) added that identifying how followers' cultures impact preferences, the stereotypes of leader preferences, and how these elements impact business. Previous research discovered that global leaders are thought to exhibit common behaviors such as cosmopolitan, cognitive complexity, mental inquisitiveness, honesty, humility, and personal resilience (Earley & Ang, 2003; Javidan, Steers, & Hitt, 2007; Mendenhall, Osland, Bird, Oddou, & Maznevski, 2008).

In addition, no single preeminent theory substantiates the link between cultural intelligence and transformational attributes of leaders and managers (Keung, 2011; Lugo, 2007; Mannor, 2008). One previous study showed substandard results between cultural intelligence and the social influence predictors of transformational leadership, suggesting the influence of an unidentified factor of emotional intelligence (Brown & Moshavi, 2005). The relationship of the cultural intelligence and transformational leadership skills of managers influences how successful they are incorporating changes in the modern workplace (Bikson, Treverton, Moini, & Lindstrom, 2003; Heames & Harvey, 2006; Moran, Harris, & Moran, 2011; Oreg, 2006). Popper (2002) argued that a good theory has to be risky, as it can be shown to be either true or false. A bad theory may fit any data set according to Fontaine (2007). The assessment of the relationship between cultural intelligence and transformational leadership remains undiscovered in the literature when defining leadership, culture, and organizational behaviors (Ismail, Mohamed, Sulaiman, Mohamad, & Yusuf, 2011; Keung, 2011; Lugo, 2007); as Loehr and Schwartz (2001) called for continued studies in the psychology of leadership as a multidimensional, culturally-linked phenomena.

Leadership and Transformational Motivations

Many management theories have been tested across cultures (Dickson, Den Hartog, & Mitchelson, 2003; Vallas, Zimmerman, & Davis, 2009). The relationship between cultural intelligence and emotional intelligence theory and skills has been developed and contrasted numerous times (Goleman, 1995; Hui-Wen, Mu-Shang, & Nelson, 2010; Racheli, Dolan, & Cerdin, 2005); which is similar to comparisons of the relationship between transformational leadership and emotional intelligence (Yitshaki, 2012). In contrast, conjoined research of the relationship between transformational leadership and cultural intelligence theories is limited (Pauliené, 2012).

A secondary principle theory integrated within this research study was the leadership transformational skills developed by Bass and Avolio (1994). There are extensive studies on the singular emotional intelligence (EI) along with both cultural intelligence and transformational leadership skills (Dean, 2007; Kim, 2009; Lugo, 2007). Transformative leaders motivate subordinates to reevaluate known resolutions rather than apply old solutions to new problems (Jones, Harris, & Santana, 2008). Contemporary transformational

leadership skills were compared for interactions with cultural intelligence attributes within this research study.

The social psychology and attribution theories added situation-specific behaviors based upon cultural traits (Webb, 1983). The social cognitive theory of personality (Bandura, 1986) and self-determination theory (Deci, Koestner, Ryan, & Cameron, 2001; Ryan & Deci, 2008) are foundations to the cultural intelligence theory development of the scale instrument. In the social cognitive theory individuals believe they can intentionally influence their life circumstances (Bandura, 1986; Deci et al, 2001), complimenting the need for managers in American multinational companies to strengthen his or her cultural intelligence skills in the 21st Century (Deci & Ryan, 2000; Moon, 2010; Ryan & Deci, 2008). In the self-determination theory personal choices or intrinsic aspirations energize individual actions. Both theories allow individuals to adapt to new diverse environments (Deci et al., 2001).

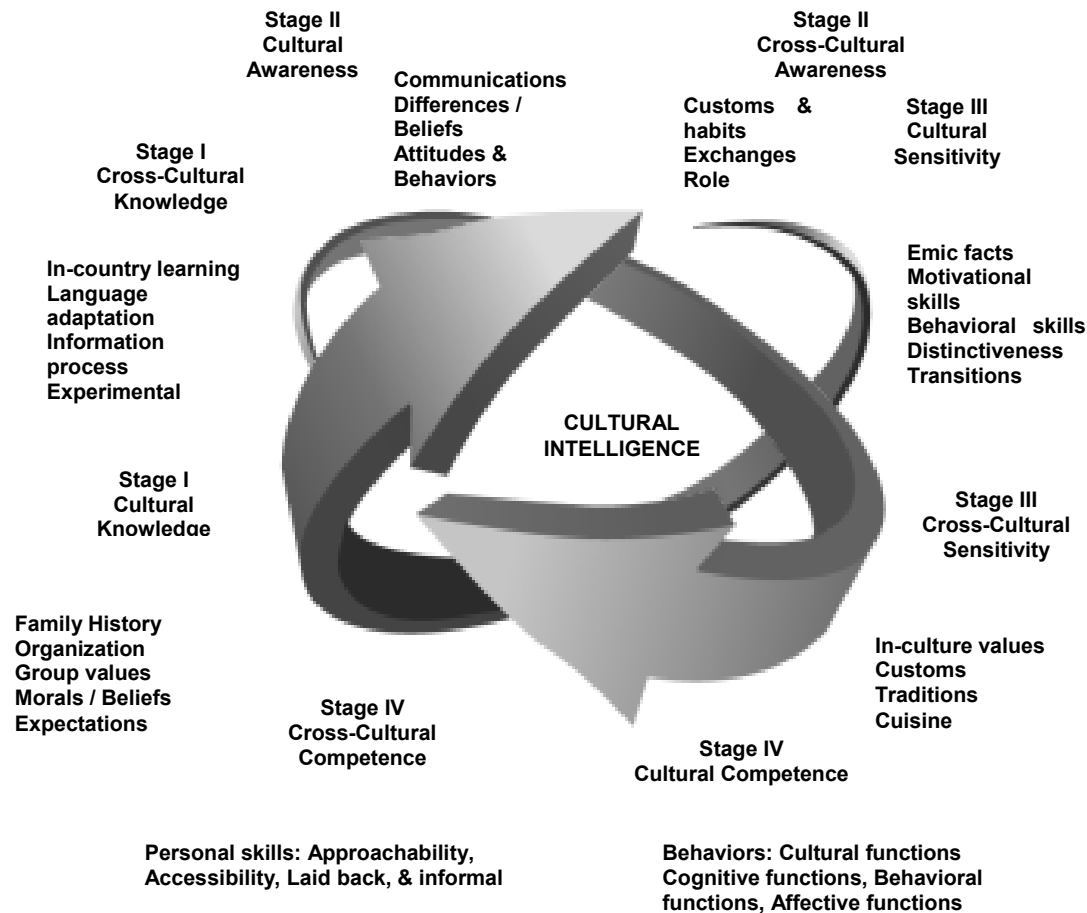
The development of culturally competent personnel and leaders involves four levels of understanding, education and relationships (Brownlee & Lee, 2012; Caligiuri & Tarique, 2012; Chemers, 1997). The first stage in building culturally competent leaders is acquiring the knowledge of the cultural characteristics, values, beliefs, and behaviors of another cultural group (Kiyokawa, Dienes, Tanaka, Yamada, & Crowne, 2012). The second stage of building culturally competent managers is maintaining the cross-cultural and cultural awareness, and being open changes in cultural attitudes toward other cultures (Brownlee & Lee, 2012; Webb, 1983). The third stage involves the understanding of the cultural differences and being sensitive to the intercultural conflicts that arise (Brownlee & Lee, 2012; Chiu & Hong, 2005; Johnson, Cullen, Sakano, & Takenouchi, 1996; Shapiro, Ozanne, & Saatcioglu, 2008; Skarmas, Katsikeas, Schlegelmilch, 2002; Zagorsek, 2004).

The last stage of cultural competence combines all of the previous steps and integrates the different behaviors, attitudes, and policies into cross-cultural group settings (Brownlee & Lee, 2012; Crowne, 2008; Gregersen & Black, 1990; O'Sullivan, 1999). Zander, Mockaitis, and Butler (2012) added that cross-cultural competence is essential for leadership functioning in multicultural teams. The progression and attributes are shown in Figure 1 for developing cultural competent personnel with the cultural and cross-cultural intelligence necessary to function effectively in the 21st century.

RESEARCH DATA AND METHODOLOGY

The methodological design for this research study was a non-experimental (no control group) quantitative survey method and multivariate design (using a survey as a data collection instrument). This method was selected because of the benefits of the survey type of research. Survey research describes a sample by the use of quantitative or numeric description of trends, attitudes, activities, or opinions (Fowler, 2009). The survey instruments were distributed to the target population of 1082 managers at two American Fortune 500 companies. There were 266 questionnaires returned (one was incomplete) for a 25% response rate. A secure socket-layer, SSL, provided a secure website that kept the data from being compromised. Managers received the request for the survey through the company secured site. The online survey contained a consent page describing issues such as privacy, confidentiality, and risks associated with this research. The Cultural Intelligence Scale was used for this research study to collect data from all participants.

Figure 1: The Cultural Intelligence Circular Progression Process Revolves Around Four Stages of Development.



In stage one the manager has an in-country, or foreign cross-cultural, exposure to a new culture. This is the foundation of cultural awareness. Stage two highlights the differences in communications, behaviors, and belief systems that the exposed relates to based upon their own cultural attitudes. Stage three is the beginning of sensitivity toward a new culture. The managers' motivational and behavioral skills transition to a higher level of operational ability. Finally in stage four the manager has the ability to cognitively function within the new level of cultural competence.

RESULTS

The survey instrument was found to have a Cronbach's Alpha of .752 for the 10 items. All the correlations of the study variables were examined to determine the strength the inter-relationship (Ang et al., 2007; Van Dyne et al., 2008). The correlations for the research study between the outcome variables (CI Cognitive, CI Motivational, CI Metacognitive, and CI Behavioral) and the predictor variable (Transformational Leadership) ranged from 0.199 (CI Cognitive), 0.266 (CI Motivational), 0.295 (CI Metacognitive), to 0.322 (CI Behavioral).

The results of this analysis for this research question indicated a significant statistical relationship for CI behaviors and CI motivations and TL. A factorial ANOVA analysis with covariate interaction was also performed to test the homogeneity of variance for CI and TL of all levels of managers. The Levene (1960) test was also performed to test the homogeneity of variance where the null hypothesis is that the variances in the different groups were equal during the one-way ANOVA analysis. The Levene test results were significant for CI behaviors, CI Motivations, and CI metacognitive indicating that the homogeneity of variance was not equal and that the assumption of the homogeneity of variance has been violated. The

Leven test results were non-significant for CI cognitive indicating that the homogeneity of variance assumption was violated. Degrees of freedom one and two are defined for each manager grouping, first-level and all other levels, as N-1 for the 95% confidence level. See table 1.

Table 1: Leven’s Test of Equity of Error Variances

Variables	F	df1	df2	Sig.
CI Behaviors	1.94	20	244	<0.05**
CI Motivations	2.46	20	244	<0.05**
CI Cognitive	1.12	20	244	>0.05**
CI Metacognitive	2.89	20	244	<0.05**

This table shows Levene’s homogeneity of variance test of the null hypotheses that the variances in the different groups are equal. Levene’s tests the assumption that the spread of the score is roughly equal at different points on the predictor variable. Levene’s test is significant at $p \leq 0.05$. If the variances are significant then it is concluded that the null hypothesis is incorrect and the variances are significantly different and the assumption of homogeneity of variance has been violated. If Levene’s test is non-significant then the variances are approximately equal and the assumption is tenable. The degrees of freedom df1 is the quantity of different sampled groups minus one. The degree of freedom df2 is the number of sampled cases minus the number of different groups.

The variable effects and interactions were also analyzed using factor analysis with Varimax rotation and found to be from 0.4 to 2.8. The factor analysis was conducted in an attempt to reduce the R-Matrix of correlations down to meaningful (parsimony) non-latent variables (Cattell, 1966; Field, 2009).

A post hoc test was performed using the repeated-measures ANOVA to test participants exposed to the same conditions of the experiment; in this case, the use of the CQS and MLQ instruments (Maxwell & Delaney, 2003). This analysis provided an inspection of the *within-participant* variances between the managers exposed to the two different experimental conditions. First, compound symmetry was measured to demonstrate that the variances and covariance’s of the experimental conditions were equal (Baguley, 2004). Second, sphericity was also measured for the equality of variances of the differences between treatment levels. In the current research study sphericity was not a constraint since there must be more than two conditions before there is concern (Field, 2009). The Mauchly’s test statistic was used to find significant differences between the variances of the differences. The Bonferroni adjustment methodology was also employed to minimize the family wise error rate (collection of ANOVA comparisons) and the resulting loss of statistical power (Toothaker, 1993). The results after adjustment indicated non-significant interactions between the CI Abstractions and the TL per manager level. See table 2.

Table 2: Repeated Measures ANOVA Test

Variables	F	df1	df2	Sig.
CI Behaviors	1.94	20	244	<0.05**
CI Motivations	2.46	20	244	<0.05**
CI Cognitive	1.12	20	244	>0.05**
CI Metacognitive	2.89	20	244	<0.05**

Table two lists the ANOVA results for the four research variables, indicating there was a statistically significant relationship between CI variables and TL. The statistical relationship between CI and TL skills has been the subject of a limited number of research studies to date (Keung, 2011; Keung & Rockinson-Szapki, 2012). These results were a new empirical paradigm in research of the CI and TL statistical associations which had not been studied before Keung (2011). The current research results indicate an average association between CI variables and TL of managers.

Additional Analysis

The correlations of the transformational leadership variables predicting cultural intelligence after accounting for manager level were Pearson’s r coefficient numbers ranged from -0.147 (CI Motivation correlated to TL) to 0.322 (CI Behaviors correlated to TL). The positive numbers indicated that the cultural intelligence variable increased at an incremental rate in managers so did their transformational leadership level. The negative numbers indicated that the cultural intelligence variable decreased at an incremental rate in managers so did their transformational leadership level. See table 3.

Table 3: Correlation of Cultural Intelligence Variables and Transformational Leadership

	N	Pearson's r & Covariances	p
BEH_Index	265	0.322*	0.005***
TL_index	265	0.133	0.005***
MGR_Lvl	75	-0.031	0.005***
MOT_Index	265	0.25	0.005***
TL_Index	265	-0.147	0.005***
MGR_Lvl	75	0.084	0.005***
COG_Index	265	0.199	0.005***
TL_Index	265	0.088	0.005***
MGR_Lvl	75	0.044	0.005***
MC_Index	265	0.295	0.005***
TL_Index	265	0.123	0.005***
MGR_Lvl	75	0.019	0.005***

**Correlation is significant at the 0.005 level (2-tailed). This table lists the correlations between the Cultural Intelligence and Transformational Leadership variables. The N values are the sample sizes. Pearson’s r and covariance’s show the strength of relationship between variables and within-group error variances for the experiment. The covariate was the first-level manager for this study.*

In order to determine if any additional underlying (latent) variables were part of this research study, another factor Analysis was performed on the instrument. The variables analyzed were contained in the MLQ, CQS instruments, with the added manager levels. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was equal to 904 indicating that the variables used in this research were highly correlated. The results showed a mean range from 1.79 to 5.08 and were in turn determined to be inconclusive for the levels of managers in this study.

The research data was analyzed using the Varimax Rotation analysis to determine if the sample size was adequate. The research variables were compiled from the CQS and the MLQ. The CQS variables analyzed were CI behavior, CI motivational, CI cognitive, and CI metacognitive; the MLQ variables were composed of the combined transformational leadership style, with the added manager levels. The manager level variable was the strongest factor. The factor analysis was conducted in an attempt to reduce the R-Matrix of correlations down to meaningful (parsimony) non-latent variables (Cattell, 1966; Field, 2009). The scree plot scale measured the study variables using eigenvalues from a low of (0.0) to a high of (12.7). Field (2009) recommended that the Varimax Rotation variables measured with eigenvalues below 0.7 be discarded when sample sizes are low, although in this case they were retained due to the high sample size of 265. See Figure 2.

Figure 2: Scree Plot of Study Analysis

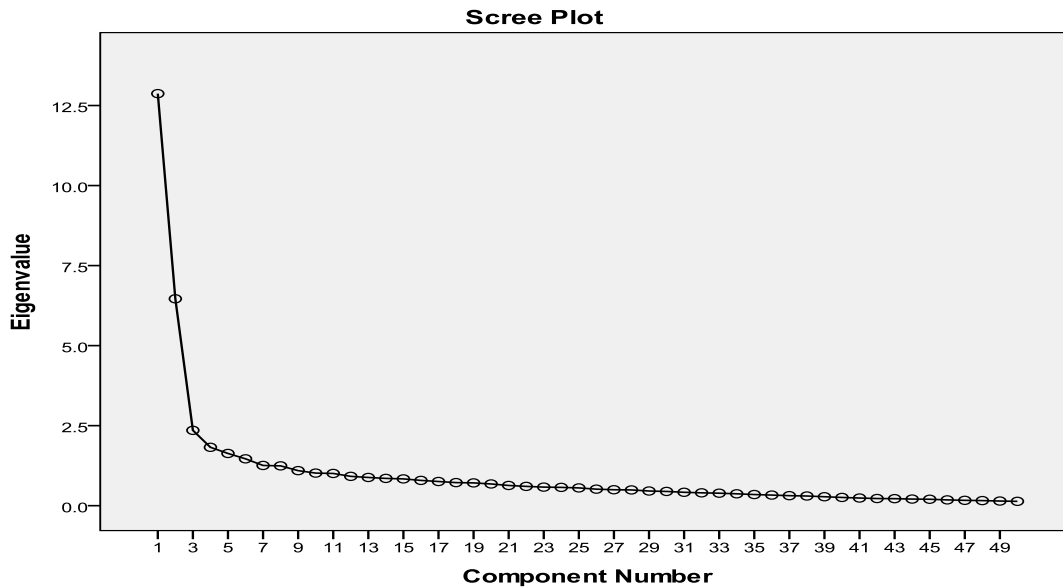


Figure 2: Scree plot from SPSS software of the Varimax Rotation Analysis for the research study. The scree plot graphs the eigenvalues for the variables in the research study. The scree plot shows a point of inflection, approximately 2.5, where the mean of the horizontal and vertical graphs intersect. The $N = 50$ for the number of factors in the research study. The communality after rotation was .6 which indicated that the scree plot of the 252 sample size was adequate for this research study (Field, 2009).

Evaluation of Findings

Virtually every leadership and management theory has been tested across cultures (Gelfand, Erez, & Aycan, 2007) before Keung and Rockinson-Szapkiw (2012), which highlighted the need for higher levels of cultural intelligence among 21st century managers. Many leadership models of the past decade have not captured this new leadership dynamic in a contemporary knowledge-driven economy (Lichtenstein et al., 2007). Most cultures exist to provide a source of identity among members (Earley, 2006), and because of increased immigration of workers across borders, American Fortune 500 companies are expanding teams containing workers with diverse ethnic and religious backgrounds, which requires new skills to manage effectively (Roberge, Lewicki, Hietapelto, & Adbyldaeva, 2011). In summary, managers must prepare to effectively integrate this new diversity paradigm of resources in order to remain effective in the 21st century. The following section discusses how this project met the research expectations and also provides brief explanations for conflicting results.

Cultural Intelligence Behaviors and Motivations and Transformational Leadership

A statistically significant relationship was found between CI behaviors and motivations and TL of managers at the American Fortune 500 company even with the covariate partialled out of the analysis. The results from this study may be used to extend the Keung and Rockinson-Szapkiw (2012) study. The Keung and Rockinson-Szapkiw findings were limited to a university environment. While this study investigated the same variables, these were applied to a new corporate setting using the personnel in American Fortune 500 companies. The findings in this study were similar to Keung and Rockinson-Szapkiw, although there was a higher correlation coefficient, indicating a stronger relationship between manager’s CI behaviors and TL in American Fortune 500 companies. There was also a non-significant medium variable interaction between CI behaviors and TL for second level and above managers. This finding indicated that managers in this study with high CI behaviors and TL skills are able to manage more effectively in American Fortune 500 company business settings.

Cultural Intelligence Cognitive and Metacognitive and Transformational Leadership

A statistically non-significant relationship was found between cultural intelligence (CI) cognitive and metacognitive and transformational leadership of managers at American Fortune 500 companies, although when the covariate is partialled out of the analysis the results produced a non-significant relationship. However, these results may be used to extend the Keung and Rockinson-Szapkiw study (2012). The Keung and Rockinson-Szapkiw findings were limited to university environments. While this study investigated the same variables, these were applied to a new corporate setting using personnel in American Fortune 500 companies. The findings in this study were not similar to Keung and Rockinson-Szapkiw as the covariate indicated that second level and above managers improved at a lower rate than the first level managers. There was also a non-significant strong variable interaction between CI cognitive and TL. This finding indicated a need existed for additional training for second level and above managers to improve their CI cognitive and TL skills in order to manage effectively in American Fortune 500 company business settings.

Summary

The research study results indicated a relationship between cultural intelligence and transformational leadership skills of managers at American Fortune 500 Companies. Previous studies that recorded low levels of improvement in cultural intelligence and transformational leadership abilities, which resulted in a lack of leader communications and effectiveness, subordinate disloyalty, low employee motivation, employees not applying extra efforts, and a negative group environment (Amy, 2010; Jogulu, 2010; Thiederman, 2008). These same issues have also been investigated in the larger American Fortune 500 companies (Wallace & Figueroa, 2012).

Each CI style was compared to managers' TL. Each CI attribute was evaluated for Pearson's r correlations. This highest Pearson's r was CI behavior (1.814), which indicates the percentage of variability shared and improvement with transformational leadership. This study showed statistically significant relationships between the cultural intelligence behaviors and motivation skills and transformational leadership abilities of managers in Fortune 500 companies in America. This study also showed statistically non-significant relationships between cultural intelligence cognitive and metacognitive skills and transformational leadership abilities of managers in American fortune 500 companies in America. The results of this study indicated that there was a need for improvement at all level of managers for cultural intelligence skills in order to manage effectively in 21st century American Fortune 500 company multicultural business settings.

Implications

According to the literature, managers in American corporations must embrace a solution to the lack of cultural intelligence problem. Managers must build their knowledge of cultures while transforming themselves, fostering new cultural awareness's; while enabling this research to support continued success in businesses (Creque & Gooden, 2011; Deng & Gibson, 2009; Prewitt, Weil, & McClure, 2011; Roberge, Lewicki, Hietapelto, & Abdyldeeva, 2011; Warrick, 2011). The focus of this study was on the relationship between cultural intelligence and transformational leadership skills. There were two implications discovered in these research findings. The first implication pertained to the relationship between CI behaviors and TL of managers at American Fortune 500 companies. Based upon the results of this statistical analysis there was a statistically significant relationship between CI behaviors, CI motivations, and TL of managers at American Fortune 500 companies. Even when the covariate was partialled out of the regression analysis, the relationship between CI behaviors, CI motivations, and TL among the second level and above managers was found to be statistically significant. This finding implied that managers in American Fortune 500 companies who have overcome cultural-specific biases in CI behaviors and motivations and TL are better prepared to manage resources from different cultural

backgrounds. The significance of this correlation adds to extant literature on the diverse changes required of managers in American Fortune 500 companies for the 21st century. Awareness of this relationship starts the cultural intelligence process postulated earlier in this study.

The second implication addressed the research question pertaining to the relationship between CI cognitive, CI metacognitive, and TL of managers at American Fortune 500 companies. Based upon the results of this statistical analysis there was a statistically significant relationship between CI cognitive, CI metacognitive, and TL of managers at American Fortune 500 companies. Although, when the covariate was partialled out of the regression analysis, the relationship between CI cognitive, CI metacognitive, and TL among the second level and above managers was found to be statistically non-significant. Therefore the third implication in this study was that the relationship between CI cognitive and TL was statistically non-significant when the covariate was partialled out of the analysis. This finding implied that second level and above managers in American Fortune 500 companies may not have overcome cultural-specific biases in CI cognitive and TL and are not prepared to manage resources from different cultural backgrounds. The significance of this correlation adds to extant literature on the diverse changes required of managers in American Fortune 500 companies for the 21st century. Awareness of this relationship should start the education process for CI cognitive and CI metacognitive postulated earlier in this study.

Conclusions were drawn solely from the data collected from the 265 managers who responded to the survey. The findings from the research were statistically significant and support and expanded upon the conclusions of Bass and Avolio (1994), Bland (2007), and Ismail, Reza, & Mahdi (2012), who found that leaders who successfully implemented transformational leadership processes will upgrade their knowledge, relevant skills and abilities to become more effective and gain commitment by followers.

CONCLUSIONS

The purpose of this quantitative method of inquiry was to determine if there is a relationship between CI attributes and TL abilities of managers at American Fortune 500 companies and what effect the interaction of these abilities has upon these managers. Previous studies have investigated leadership cultural intelligence, emotional intelligence, transformational and communication leadership although these linkages are still being discovered (Massury, 2009; Yitshaki, 2012). Contemporary researchers have also addressed specific populations, but more studies are needed to focus on the diversity of cultural intelligence and incorporating the transformational skills of managers in American Fortune 500 companies. Pieterse, Van Knippenberg, and Van Dierendonck (2013) identified how cultural diversity effects team learning, biases, and performance within social groupings. Pieterse et al (2013) continued that cultural diversity has the potential to stimulate and also disrupt the performance of teams. In particular, Kearney and Gebert (2009) found that team diversity moderated the effectiveness of the transformational manager through the integrating of information within the group. The potential outcome of this research is that managers may better understand the factors that promote higher levels of cultural intelligence through the engagement of their transformational charismatic skills (Ismail, Reza, & Mahdi, 2012).

Each cultural intelligence (CI) style was compared in this study with transformational leadership (TL) abilities of managers. It was found that managers used the CI behaviors and transformational leadership styles most showed the highest level of CI increase. This study showed statistically significant relationships between the cultural intelligence behaviors and motivation skills and transformational leadership abilities of managers in Fortune 500 companies in America. This study also showed statistically non-significant relationships between cultural intelligence cognitive and metacognitive skills and transformational leadership abilities of managers in American fortune 500 companies in America.

The smallest improvement after the covariate was partialled from regression model was the second level and above managers that use CI cognitive and TL styles in the workplace. This result was a non-significant

statistical relationship between these variables indicating that the regression result was a chance finding only. In this case, this study did not show support for alternate hypotheses for the CI cognitive and TL of managers.

There were four limitations identified during this research study. The first limitation was the confounding effect of self-rating managers. There also was no experimental manipulation performed to minimize causality or bias during the research. This limitation was minimized statistically with the multi-regression and correlation techniques used (Zerbe & Paulhus, 1987). The second limitation was that the research period was from February to June 2014. If there had been a longer collection and research report period there may have been a higher response rate to the questionnaire. The higher response rate would have added to the analysis of the findings. The third limitation was that culture-specific biases from ethics-related manager surveys. The mitigation of this cultural bias was that there was a highly diverse manager population represented by multiple cultures from around the world. The preamble also requested the respondents to put aside any biases and answer the questionnaire honestly. There also were reassurances that all data would remain private and any release of data must first be approved by the Company. The final limitation to this study was the inherent nature of using a quantitative research methodology. Although, this study provided statistically tested data for researchers, it did not give rich, in-depth personal experiences or perspectives from managers, as would a qualitative study. A qualitative study would have delved into manager's beliefs and opinions about their applications of cultural sensitivity, awareness, intelligence and transformational leadership after having experienced these issues with their peers. However, qualitative results would not have indicated possible causal links or correlations between cultural intelligence and transformational leadership manager attributes.

Managers from other American Fortune 500 companies may feel differently about their use of cultural intelligence and transformational leadership skills within different work environments. This study has shown to be valid to build a statistical foundation to demonstrate the existence of the relationship between cultural intelligence and transformational leadership in American Fortune 500 companies. Future quantitative research is recommended to replicate that the statistical relationship between the cultural intelligence and transformational leadership skills practiced in other large American Fortune 500 companies and United States Government agencies. The application of field interviews, collecting in-depth experiences, opinions and feelings may reveal new details and elegant characteristics of this new paradigm (Patton, 2002). Future qualitative research is also recommended to reveal new themes, patterns, and theoretical foundations of the combined cultural intelligence and transformational leadership as perceived and experienced by managers practicing in the field.

An advantage of this study was the credibility and generalization of the findings. The setting was investigated using actual managers within an actual work setting. This advantage adds credibility to the phenomena studied in real world settings. Through being willing to enhance their understanding, leaders and managers transform business with new cultural perspectives (Bush, 2009). The researcher recommends that future research studies to explore the richness of diverse personal perceptions, experiences, and theoretical underpinnings of the cultural intelligence progression within the transformational management abilities at additional American Fortune 500 companies.

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