

CULTURAL AND EMOTIONAL INTELLIGENCES IN THE DEVELOPMENT OF GLOBAL TRANSFORMATIONAL LEADERSHIP SKILLS

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ABSTRACT

This study examines the strength and direction of relationships between the self and social dimensions of both emotional and cultural intelligences and transformational leadership skills. Data was gathered from 171 students enrolled at Les Roches International School of Hotel Management in Switzerland. Statistical analyses included factor analysis, Cronbach's Alpha, Pearson' r , and regression. Results found a direct correlation between the self and social dimension of transformational leadership and emotional and cultural intelligence skills, supporting the study hypotheses. This study contributes to the leadership literature by demonstrating a relationship among the three major constructs of the study findings that can benefit future participants in leadership training programs.

Keywords: Emotional Intelligence, Cultural Intelligence, Transformational Leadership

ABSTRACTO

Este estudio examina la fuerza y la dirección de las relaciones entre el yo y las dimensiones sociales tanto de las inteligencias culturales y emocionales como de las destrezas de liderazgo de transformación. Los datos se obtuvieron de 171 estudiantes matriculados en la Escuela Internacional Les Roches de Gerencia en Hotelería en Suiza. El análisis estadístico incluye análisis de factores, la prueba Alpha de Cronbach, la prueba r de Pearson y regresión. Los resultados muestran una correlación directa entre el yo y la dimensión social del liderazgo de transformación y las destrezas de inteligencia cultural y emocional, que respaldan la hipótesis bajo estudio. Este estudio contribuye a la literatura del liderazgo al demostrar una fuerte relación entre los tres constructos mayores del estudio, hallazgos que pueden beneficiar a futuros participantes en programas de adiestramiento de liderazgo.

Palabras clave: Inteligencia emocional, Inteligencia cultural, Liderazgo de transformación

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Introduction

In recent years, a number of studies have focused on the relationship between leadership behavior and success in the context of emotional, cultural, and social forms of intelligence (Earley & Ang, 2003; Goleman, 1995; 2004). Rapidly increasing globalization requires a new generation of leaders who have a high degree of emotional and cultural competency. It is imperative that these leaders not only be empathetic but also comprehend and appreciate cultural pluralism so they and their firms can adapt to new cultures. In order to succeed, this new generation of leaders should acquire new knowledge, skills, and abilities, as they face a constantly changing and borderless global marketplace. Emotional intelligence, cross-cultural adjustment, cross-cultural awareness, and managing cross-cultural conflict has been identified as some of the global competencies needed by leaders, in order to compete effectively in a global marketplace (Vance & Paik, 2006).

This research study was designed to measure and examine the degree to which emotional intelligence (EQ) and cultural intelligence (CQ) self and social dimension skills are related to transformational leadership self and social dimension skills. The study examined whether positive relationships exist between emotional and cultural intelligence self and social dimension transformational leadership skills. *Self-dimension skills* refer to the individual skills and behaviors that impact a person's relationship with themselves, whereas *social dimension skills* refer to the individual skills and behaviors that impact a person's relationship with others (Goleman, 1995).

Recent studies examining emotional, social, and cultural intelligence as factors for individual success in the business world have driven the question of how to develop global leaders. Although several theorists work within the area of emotional and cultural intelligence and leadership, none has thus far developed a precise theory about how to develop global leaders. Alon and Higgins (2005) presented a model of components of global business leadership success but did not include the social dimensions of the leaders. They also failed to present a leadership theory that grouped all three forms of intelligences (IQ, EQ, and CQ).

The key to international leadership success lies in a mixture of personality characteristics and managerial competencies. The “determinant of global competencies” is the psychological profile of stable personality traits, comprising four attributes: intellectual capacity, self-confidence, openness to experience and emotional stability. Managerial competencies include relational abilities, cultural sensitivity, linguistic ability, and stress management (Jokinen, 2004; Jordan & Cartwright, 1998).

In order to be effective, global leaders must be skilled in the interpersonal conduct of global business. This requires both emotional and cultural intelligence. Increasing globalization will make EQ and CQ skills more relevant throughout entire organizations; everyone involved in global businesses needs to focus on possessing these two skills (Alon & Higgins, 2005).

At present, no model is available that promotes the development of global transformational leaders with emotional and cultural intelligence. To examine whether or not exposure to emotional and cultural intelligence training would have a positive effect on the development of transformational leadership skills, a model was developed to

assess the relationship among these three constructs. Existing research suggests that transformational leadership skills can be paired between self and social dimensions of a leader, with the Goleman *et al.* (2002) primal leadership theory plus the Van Dyne and Ang four factors model of cultural intelligence.

Transformational leadership theory (TLT) is one of the most applied theories of leadership development. Based on this theory, a new model for global transformational leadership with emotional and cultural intelligences could define new areas for development in the leadership field. Today, evidence supports the development of global leaders who rely on three forms of intelligence: rational and logic-based verbal and quantitative intelligence (IQ), emotional intelligence (EQ), and cultural intelligence (CQ) (Alon & Higgins, 2005, p. 503).

Alves *et al.* (2006) found that research on the application of leadership theories across cultures suggests that leadership practices are culturally-bound (p. 338). Research of Gabel *et al.* (2005) on emotional intelligence and leadership and found that this form of aptitude could predict cultural adjustment and success in global or international management assignments. These findings also provide an empirical foundation for developing this study's model. Previous research by Goleman *et al.* (2002), who coined the term "primal leadership theory," demonstrated the importance of emotional intelligence in leaders. An emotionally intelligent leader (primal leader) promotes self-awareness, self-management, social awareness, and relationship management (Goleman *et al.*, 2002).

Emotional intelligence has been studied extensively in recent years and researchers have noted that theories of emotional intelligence do not address a person's

understanding of and ability to succeed in different cultural environments (Ang, Van Dyne & Koh, 2005; Earley & Ang, 2003; Earley & Mosakowski, 2004). Theorists have suggested that emotional intelligence can predict success if the individual understands how to function within specific cultural environments (Earley & Ang, 2003). These dynamics, according to Earley and Ang, led to the development of the theory of cultural intelligence.

The construct of culture, or cultural “syndromes”, consists of specific characteristics shared by a set of people and results from common denominators of a society, such as regional location, language, generation, religion or political experience (Georgianna, 2007, p. 572). Cultural intelligence (CQ) is defined as a person’s ability to function effectively in situations characterized by cultural diversity (Ang, Van Dyne, & Koh, 2005; Earley & Ang, 2003; Earley & Mosakowski, 2004). CQ provides insights about an individual’s ability to cope in multicultural situations, engage in cross-cultural interactions, and perform in culturally diverse work groups.

The three questions that guided this study are:

1. What is the relationship between self-perceived emotional and cultural intelligence self-dimension skills and transformational leadership self-dimension skills?
2. What is the relationship between self-perceived emotional and cultural intelligence social dimension skills and transformational leadership social dimension skills?

3. What is the relationship between self and social, emotional and cultural intelligence and transformational leadership self and social dimension skills?

The author focused her research questions on testing and measuring the relationship among three constructs to help educators develop teaching models for global leadership training. Through incorporating emotional intelligence and cultural intelligence skill development in a leadership education curriculum, students will understand the importance of self-knowledge, self-mastery, and social knowledge as critical components of successful management and leadership.

Why transformational leadership with emotional and cultural intelligences?

According to Humphrey *et al.*, (2008), several studies have demonstrated that leaders have substantial influence over group members' moods and emotional states, and this influence can either help or hinder employee performance. Besides dealing with their own emotions, managers also have to deal with the emotions and behavior of others (Ostell, 1996), thus becoming emotional managers (Brotheridge *et al.*, 2008, p. 111).

Research has found that a leader's mood and actions affect the emotions of people around him/her and this directly affects an organization's success (Goleman *et al.*, 2002). Goleman (2004) found a direct relationship between emotional intelligence and success, especially among leaders. He proposed that to be successful, every leader should possess emotional intelligence skills. Goleman (2004) developed a model that describes five components of emotional intelligence that are directly associated with leader effectiveness and success. Our model sorts these components into three categories:

technical skills, cognitive abilities, and competencies. The primal leadership theory links emotional intelligence and leadership success, stating that a leader's primal task is to manage his/her emotions in a way that promotes emotional intelligence within the organization, also known as emotional leadership. Empathy and resonance are the two most important factors in this theory, built upon the leader-member exchange within an organization.

In this study, emotional intelligence competencies are related to outstanding leadership as defined by Goleman *et al.*, in their 2002 definition of primal leadership. The primal leadership model presents two domains and two competencies or clusters associated with each domain. The four clusters presented in this model are self-awareness, self-management, social awareness, and relationship management. The clusters are grouped within two domains: the personal (self awareness and self management) and the social (social awareness and relationship management). The personal competency domain is related to personal abilities (how an individual manages him or herself) while the social competency domain is related to social abilities (how a person manages relationships).

In order to lead organizations of the 21st century, leaders need to understand the regional and ethnic cultural diversity of the work environment in addition to the cross-cultural community of workers around the world (House *et al.*, 2002). The link between emotional intelligence and success can only be transferred to other nations/cultures through cultural intelligence (Alon & Higgins, 2005).

Van Dyne's and Ang's (2005) four factor model of cultural intelligence is based on research that suggests four factors for measuring cultural intelligence: CQ-Strategy, CQ-Knowledge, CQ-Motivation, and CQ-Behavior.

CQ-Motivation is defined as the sense of confidence a person has that he can function effectively in settings characterized by cultural diversity. CQ- Behavior is a person's ability to adapt verbal and nonverbal behavior appropriately to different cultures. CQ-Knowledge is a person's understanding of cultural similarities and differences. CQ-Strategy - how an individual interprets and applies inter-cultural experiences - occurs when people make judgments about their own processes and those of others.

Bass (1990) defined management as a formal set of procedures to review the progress toward common goals between organizational superiors and their subordinates. Bass also stated that a leader's task is to facilitate personal interaction and motivation among co-workers in order to attain goals.

According to Bass (1985), transformational leaders possess four types of behavior: charismatic leadership or idealized influence (CL or II), inspirational motivation (IM), intellectual stimulation (IS), and individualized consideration (IC). Bass and Avolio (2004) developed the MultiFactor Leadership Questionnaire (MLQ) to measure transformational and transactional leadership. The MLQ short version was one of the measurement tools used in this research.

The Relationship between Emotional Intelligence and Transformational Leadership

Although researchers have recently begun investigating the association between transformational leadership theory and emotional intelligence, it is still relatively new as an area of academic study and its practical application to the business environment. Dasborough and Ashkanasy (2002) studied the relationship between transformational leadership and the attributions of the leader-member exchange within organizations. They suggested a model that focuses on two central ideas: leadership as an emotional process and leadership as a process of social interaction. Their model focused on member perspectives on how attributions define leaders' influences within an organization. The authors examined attributions and emotional responses to transformational leadership behaviors, the role of emotions in the leader-member relationship, and incorporated emotion-related variables. Personal consequences for members were directly related to the emotional responses members had towards their leader's behavior.

In another study, Barling *et al.*, (2000) examined the transformational leadership styles and emotional intelligence of 49 managers, finding that emotional intelligence is positively related to the three components of transformational leadership: idealized influence, inspirational motivation and individualized consideration. The researchers also found that contingent rewards and laissez-faire leadership were not related to emotional intelligence.

According to Gardner and Stough (2002), the area of emotional intelligence theoretically appears to have great validity in predicting effective leaders. Because it was thought that previous research did not provide sufficient empirical information on the relationship between transformational leadership and emotional intelligence, Gardner and

Stough (2002) conducted research on the relationship between leadership and emotional intelligence among a group of 110 senior level managers. They found a strong positive relationship between transformational leadership and total emotional intelligence scores. All components of transformational leadership correlated positively with the components of emotional intelligence. Understanding emotions was the strongest predictor of transformational leadership, followed by emotional management, which emerged as the strongest predictor of inspirational motivation and intellectual stimulation (Gardner & Stough, 2002). Drawing on these arguments the author proposes the following hypothesis:

H1. Emotional intelligence shares a relationship with transformational leadership skills.

The Relationship between Emotional Intelligence and Cultural Intelligence

In 2003, Earley and Ang emphasized the difference between CQ and EQ in their discussion of emotional intelligence theory as failing to explain how people with high EQ might adjust easily to new cultures (p. 4). They concluded that the most important difference between CQ and EQ is that emotional intelligence presumes a degree and familiarity with a cultural context that does not exist. Researchers in the EQ field did not limit their studies to be culture-bound and do not provide adequate discussions of how they treat concepts cross-culturally (p. 8). In 2004, Earley and Peterson recognized that emotional intelligence captured a variety of attributes related to a person's ability to read and respond to self-regulated emotion. They also stated that many schemas of emotional

indications used to discover another person's emotional state differ radically between cultural groups.

According to Earley and Peterson (2004), a person who has high emotional intelligence in his or her native culture may be entirely incapable of generalizing that emotional intelligence across cultural settings. They stated (2005) that although CQ is related to EQ, it picks up where EQ leaves off and is the “seemingly natural ability for a cultural outsider to interpret someone’s unfamiliar and ambiguous actions or gestures the way that person’s cultural peers would” (p. 139).

Recently, Van Dyne and Ang (2005) affirmed that CQ provides insights and abilities to cope with multi-cultural situations, engage in cross-cultural interactions, and perform in culturally diverse groups that other intelligences do not. Previous researchers failed to focus on the importance of exploring and applying emotional and cultural intelligence within work, business, or corporate environments. They limited their focus to the differences between forms of intelligence rather than their application to developing a new generation of global leaders.

A recent study by Alon and Higgins (2005) recognized the importance of both forms of intelligence for global leadership success, but no one has yet developed an actual training tool for the application for both EQ and CQ. Some organizations have started to explore training for the development of emotional intelligence skills but few have focused on cultural intelligence training, which is often overlooked as an important factor for company success.

Alon and Higgins (2005) said that, based on all the evidence available, developing global leaders required a core of three intelligences: rational and logic-based verbal and

quantitative intelligence (IQ), EQ, and CQ (p. 503). Allon and Higgins concluded that increases in globalization would make EQ and CQ skills more relevant for entire organizations (2005, p. 503). They presented a model of the components of global business leadership success that includes the three intelligences (IQ, CQ, and EQ) that together create the effective leadership behaviors necessary for domestic and global leadership success. They included organizational CQ as a predictor for leadership behaviors and geographic and ethnic CQ as a predictor of global leadership success (p. 509).

Another recent study by Gabel *et al.*, (2005) examined how emotional intelligence could be a predictor for cultural adjustment for success in global or international management assignments. The study outcomes showed a significant correlation between interpersonal emotions and job performance and also found that cultural differences are related to EQ but not to adjustment to the new culture and country. Findings suggested that EQ is a critically needed skill for adjustment and success with international assignments.

New Model: Transformational Leaders with Emotional and Cultural Intelligence

EQ and CQ, as noted, are two important factors for success in leadership. Alon and Higgins (2005) said that, based on all the evidence available, the core for training global leaders is the development of three intelligences: rational and logic-based verbal and quantitative intelligence (IQ), EQ, and CQ (p. 503). Although there is research on the relationship between EQ and transformational leadership, and EQ and culture, there is no

empirical research on the relationship between both EQ and CQ within the context of transformation leadership.

The literature review illustrates how conceptual frameworks of cultural and emotional intelligence have evolved in recent years. The model developed by Allon and Higgins (2005), which presents the components of global business leadership success, includes three intelligences (IQ, CQ and EQ) that together create effective leadership behaviors for domestic and global leadership success. Gabel *et al.*, (2005) studied how EQ could be a predictor for cultural adjustment for success in global or international management assignments and their findings reflected the fact that EQ is a major skill for international assignments.

These studies provide the theoretical foundations for a potentially new model, which examines transformational leadership as well as emotional and cultural intelligence. Existing literature supports the idea that transformational leadership skills or competencies can be paired up to the Goleman's *et al.* (2002) primal leadership emotional intelligence theory and to the Van Dyne and Ang (2004) four-factor model of cultural intelligence.

The model for the development of global transformational leadership is based on the relationship among these three theories. It introduces a new leader who can transform the organization, understand people's emotional needs and cultural differences, and is successful in cross-cultural assignments or teams. The model suggests the integration of the three theories by grouping them into two major areas of the leader: the self dimension and the social dimension. Transformational leadership skills can be paired to EQ and CQ competencies in this way.

Transformational leadership skills can be linked to EQ and CQ competencies in the social dimension of a leader. If transformational leaders understand other people emotionally and culturally, they will be able to stimulate creativity in followers. If they serve as mentors and recognize personal emotions in others, they will make more sense of inter-cultural experiences and be increasingly successful working with cross-cultural teams. The model for the development of the global transformational leader includes the management of EQ and CQ skills and how these new competencies can be paired to transformational leadership skills to be more successful.

Although several investigators in the field of CQ found no significant relationship between EQ and CQ (Earley & Ang, 2003, Earley & Mosakowski, 2005; Van Dyne and Ang, 2004), the question remains whether these two intelligences paired can help develop leaders in the new millennium. Although no research has been done in the areas of transformational leadership and cultural intelligence, previous research led to the following hypothesis:

H2. Cultural intelligence shares a relationship with transformational leadership skills.

As suggested by Allon and Higgins (2005) with their model of the components of global business leadership success and by Gabel, Dolan and Cedin (2005), EQ is a major skill for international assignments. Even though research in CQ has focused on differences between these two types of intelligence, it can be argued that their complimentary use will benefit the development of future global leaders and in this case will positively influence the development of the global transformational leader.

Data and Methods

Sample

This study used a cross-sectional research design based on a sample of 171 respondents drawn from the graduate and undergraduate student population enrolled at Les Roches International Hotel Management School in Blucé, Switzerland. Professors in the classroom environment administered surveys directly. Questionnaires were coded to ensure participant anonymity.

The majority of respondents were female (61%). The age of participants ranged from 19 years to 36 years and the mean age (and standard deviation) was 23.7 (2.9), with the vast majority of respondents (82%) between ages 21 to 25 with the majority of respondents enrolled in the bachelor degree program. There were no significant differences in age between genders and these were reported at 23.87 (3.5) and 23.6 (2.0) for males and females respectively.

The ethnic distribution of the Les Roches student body is highly diverse, representing 38 different nationalities. The most dominant group by region is Asian (51.5%), followed by European (22%), Caribbean and Latin American (12.3%), North American (5.5%), Middle Easterner (0.6%) and African (0.6%). According to the university's records on demographics distribution, 43 percent of the student body is Asian, followed by Europeans at 30 percent, suggesting that the study attracted a disproportionately high number of Asians and a low number of Europeans.

At the time the study was conducted, respondents reported residing for a mean of 1.4 (1.8) years in Switzerland, with nearly half (49%) reporting living in Switzerland for less than a year, one fifth (20%) between one and three years, one fourth (26%) between

three and five years, and a small minority (1%) for over five years. No significant differences were noted between gender groups related to time spent residing in Switzerland. The fact that 49 percent of respondents had lived in Switzerland for less than one year relates to their status in the programs of study. Most of the students surveyed were in their first year of studies, an important finding when we explore the number of years that the study sample was exposed to international and intercultural experiences.

The independent variables of this study consisted of management of emotional intelligence (EQ) and management of cultural intelligence (CQ). The dependent variable of the study was transformational leadership skills development. Variables in this study reflect a person's ability to relate to himself or herself and to others. Therefore, the investigator separated the research variables to reflect two areas of a person's personality: the relationship with himself or herself (self-dimension) and the relationship with others (social dimension). The three constructs being studied contain elements of both self and social dimensions, which were considered in the analysis of the data. Components of theories in emotional intelligence primal leadership theory, the four-factor model of cultural intelligence, and TLT can be generally clustered as either self-dimensioned or social-dimensioned leadership.

Instrumentation

For this study, a survey instrument was created using a combination of three validated (scales) instruments. Each scale measured one of the skill sets (variables) under

study including the Multifactor Leadership Questionnaire (MLQ), the Emotional Intelligence Appraisal, and the Four Factors Cultural Intelligence Scale.

Data Collection Approach

The survey was distributed and collected over a one-week period during spring term 2007. Respondents had 30 minutes to complete the questionnaire, which was in paper format.

Data Analyses

We examined the association between transformational leadership self and social dimensions with cultural and emotional intelligence self and social dimensions by analyzing respondents' scores on the survey questionnaire. Table 1 shows the mean and standard deviations for the 11 study variables. The means ranged from a high of 4.74 associated with cultural motivation to a low of 4.05 associated with cultural behavior with an average of 4.39. The possible range of scoring the questions was 1 through 6 and this average of 4.39 suggests that most of the responses reflected a "usually" to "almost always" response for the behavior questioned. There is also a strong alignment of the individual variables to each other at the higher level of the mid-range.

Table 1. *Mean and Standard Deviations for the Opinion Survey (n=171)*

	Mean	Std dev
Leadership (Charisma)	4.33	0.65
Influence	4.46	0.61
Inspiration	4.61	0.74
Stimulation	4.27	0.71

Consideration	4.57	0.67
Self awareness	4.61	0.62
Self management	4.22	0.62
Social awareness	4.44	0.56
Relationship management	4.60	0.71
Cultural motivation	4.74	0.82
Cultural behavior	4.05	0.95
Cultural Knowledge	4.57	0.89
Cultural Strategy	3.71	0.80

Establishing the Reliability and Validity of the Constructs

Cronbach's Alpha

The reliability coefficient illustrated in Table 1 demonstrates that each of the variables as defined by the instrument has some degree of reliability. Construct reliability indices of major multi-item variables (Cronbach Alpha) results show that the variables with higher internal consistency were cultural knowledge, cultural strategy, cultural behavior and cultural motivation.

An examination of the number of items clustered to measure each construct suggests that the scale used in this study was a small scale with an average of items ranging from eight to four, which explains why the rest of the variables showed an internal consistency of less than 0.7 (see Table 2).

Table 2. Construct Reliability Index of Major Multi-item Variables (Cronbach alpha)

	Number of Items	Cronbach alpha (internal consistency)
Leadership (Charisma)	4	0.51
Influence	4	0.49
Inspiration	3	0.61
Stimulation	4	0.64
Consideration	4	0.61
Self-Awareness	6	0.66
Self-management	5	0.56

Social-awareness	8	0.68
Relationship-management	4	0.69
Cultural motivation	5	0.80
Cultural behavior	5	0.81
Cultural Knowledge	4	0.85
Cultural Strategy	6	0.82

Note: Total sample size n=171

Following the cultural intelligence variables, the variables with higher internal consistency were relationship management, social awareness, self-awareness, stimulation, consideration and inspiration, self-management, and charisma. The only variable that did not present internal consistency was influence, with a score of 0.49, probably because this construct had only four measurement items, a small number that could have influenced the result.

Factor Analysis

The items that measure the independent variables of the study's scale were subjected to principal components analysis (PCA) using SSPS Version 14 to search for variables that loaded strongly on a single factor.

Table 3. Factor Analysis of Emotional Intelligence Measuring Items (Self dimension)

Item	Factor 1	Factor 2
Self awareness 1	0.35	0.06
Self awareness 2	0.64	0.08
Self awareness 3	0.76	0.09
Self awareness 4	0.71	-0.07
Self awareness 5	0.52	0.26
Self awareness 6	0.53	0.14

Self management 1	0.31	0.56
Self management 2	0.38	0.42
Self management 3	0.22	0.63
Self management 4	0.11	0.72
Self management 5	-0.13	0.50

Note: Extraction method by Principal Component Analysis

Rotation Method by Varimax with Kaiser Normalization

Total variance accounted for: 38.81 %

The Varimax rotation with Kaiser Normalization was applied to see if factors would emerge from multi-item measures of target variables as developed and proposed. The rotated solution revealed the presence of simple structure, with both components showing a number of strong loadings, with positive items loading strongly on factor 1, and positive and negative items loading strongly on factor 2.

Table 4. Factor Analysis of Cultural Intelligence Measuring Items

Item	Factor 1	Factor 2
cultural motivation 1	0.82	-0.09
cultural motivation 2	0.76	-0.10
cultural motivation 3	0.86	0.11
cultural motivation 4	0.60	-0.06
cultural motivation 5	0.68	-0.32
cultural behavior 1	-0.02	-0.73
cultural behavior 2	0.22	-0.84
cultural behavior 3	0.25	-0.76
cultural behavior 4	0.40	-0.67
cultural behavior 5	0.09	-0.76

Note: Extraction method by Principal Component Analysis

Rotation Method by Varimax with Kaiser Normalization

Total variance accounted for: 58.62 %

Factor analysis results show that within the scale the highest total variance of results is from cultural intelligence social dimension variables (cultural knowledge and cultural strategy). Their total variance accounted for 60.54 percent, followed by cultural intelligence self dimension variables (cultural motivation and cultural behavior) with a total variance that accounted for 58.62 percent.

Emotional intelligence social dimension variables (social awareness and relationship management) presented a total variance of 41.88 percent and the emotional intelligence self dimension variables (self awareness and self management) accounted for a total variance of 38.81 percent.

Table 5. Factor Analysis of Emotional Intelligence Measuring Items (Social dimension)

Item	Factor 1	Factor 2
social awareness 1	0.60	0.03
social awareness 2	0.61	0.15
social awareness 3	0.58	0.02
social awareness 4	0.71	-0.01
social awareness 5	0.21	-0.03
social awareness 6	0.49	0.00
social awareness 7	0.67	0.19
social awareness 8	0.61	0.20
relationship management 1	0.23	0.77
relationship management 2	0.35	0.43
relationship management 3	0.06	0.82
relationship management 4	0.41	0.61

Note: Extraction method by Principal Component Analysis

Rotation Method by Varimax with Kaiser Normalization

Total variance accounted for: 41.88 %

Tables 3 to 6 illustrate a clustering around both components. The Eigenvalue indicates relative strength of each factor in explaining the total variance of the study. The highest total variance accounted for by cultural intelligence social component variables is not distant from cultural intelligence self dimension variables and emotional intelligence social dimension variables. However, it is distant from emotional intelligence self dimension variables. Ambiguous wording of questions can account for this result.

Table 6. Factor Analysis of Cultural Intelligence Measuring Items (Social dimension)

Item	Factor 1	Factor 2
cultural knowledge 1	0.86	0.20
cultural knowledge 2	0.88	0.15
cultural knowledge 3	0.69	0.28
cultural knowledge 4	0.78	0.10
Cultural strategy 1	0.41	0.51
Cultural strategy 2	0.17	0.78
Cultural strategy 3	0.06	0.85
Cultural strategy 4	0.17	0.85
Cultural strategy 5	0.33	0.36
Cultural strategy 6	0.37	0.62

Note: Extraction method by Principal Component Analysis

Rotation Method by Varimax with Kaiser Normalization

Total variance accounted for: 60.54 %

Based on the results, the factor analysis, and the Cronbach alpha analysis, the researcher concluded that most of the factors measured were higher than required (> 0.5) to be significant and valid for internal consistency. Social awareness (5) and (6),

relationship management (2) and cultural strategy (5) were not found to be valid for internal consistencies because of measures lower than 0.5.

Although there were some factors that were not valid for internal consistency, the pattern of rotated factor-loading fits with the study hypotheses. Factor analysis results confirm that the study's measurement instrument has construct validity.

Pearson's r correlation results showed positive significant correlations among most of the variables of the study at the 0.01 level (see Table 7). Results partially support the following hypotheses:

1. Emotional intelligence (self and social dimensions) skills share a relationship with transformational leadership (self and social dimension) skills (H1). A positive correlation was found among all leadership and emotional intelligence variables.
2. Cultural intelligence social dimension skills share a relationship with all transformational leadership social dimension skills (H2). However, the cultural intelligence self-dimension skill of CQ-cultural behavior does not have a relationship with transformational leadership self-dimension skills of charisma and influence.

In addition to the conclusions based on Pearson's r coefficient of correlation, the regression analysis further supports the hypotheses.

Table 7. Bivariate Correlation Coefficients Among all Major Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) Charisma	1.00	0.46 **	0.42 **	0.27 **	0.34 **	0.28 **	0.29 **	0.24 **	0.31 **	0.24 **	0.06	0.18 *	0.04
2) Influence		1.00	0.54 **	0.45 **	0.44 **	0.44 **	0.25 **	0.43 **	0.45 **	0.23 **	0.09	0.21 **	0.06
3) Inspire			1.00	0.42 **	0.46 **	0.43 **	0.28 **	0.43 **	0.34 **	0.29 **	0.16 *	0.24 **	0.05
4) Stimulate				1.00	0.50 **	0.45 **	0.33 **	0.46 **	0.40 **	0.28 **	0.26 **	0.28 **	0.21 **
5) Consider					1.00	0.49 **	0.32 **	0.48 **	43.00 **	0.46 **	0.28 **	0.44 **	0.24 **
6) Self-aware						1.00	0.41 **	0.59 **	0.50 **	0.35 **	0.25 **	0.32 **	0.15
7) Self-manage							1.00	0.44 **	0.31 **	0.32 **	0.30 **	0.33 **	0.21 **
8) Social-awa								1.00	0.43 **	0.45 **	0.20 **	0.49 **	0.26 **
9) relation-mgt									1.00	0.33 **	0.11	0.25 **	0.20 **
10) culture-mot										1.00	0.25 **	0.55 **	0.42 **
11) Culture-beh											1.00	0.43 **	0.25 **
12) Culture-kn												1.00	0.50 **
13) Culture-str													1.00

Note: * $p < .05$

** $p < .01$

n=171

Variable labels: 1) Leadership (Charisma) 8) Social awareness
 2) Leadership (Influence) 9) Relationship management
 3) Leadership (Inspiration) 10) Cultural motivation
 4) Leadership (Stimulation) 11) Cultural behavior
 5) Leadership (Consideration) 12) Culture knowledge
 6) Self-awareness 13) Cultural strategy
 7) Self-management

Regression Analysis

To quantify the relationship between the development of the global transformational leader, and emotional and cultural intelligence independent variables, regression analysis was applied. Leadership variables (shown below) were introduced as dependent variables in a series of five regression processes and the resulting models used to test the hypothesis of this study.

Regression Model I

This model related a leader's charisma (dependent variable) to his self-awareness, self-management, cultural motivation, and cultural behavior. The overall model significance (Sig (p)) shows that exploratory variables together have a positive effect on

the charisma of a leader. When evaluating the variables independently, self-awareness and self-management are statistically significant at the alpha = .05 level, but self-management has a larger impact (see Table 8).

Table 8. Regression Analysis with Dependent Variable of Leadership (Charisma)

Independent Variables	Beta	Standardized Coefficients	t	Sig (p)	F	Sig (p)
(Constant)		0.43	5.34	0.00	6.29	0.00
Self-awareness	0.16	0.09	1.96	0.05		
Self-management	0.19	0.09	2.30	0.02		
Cultural Motivation	0.15	0.06	1.83	0.07		
Cultural behavior	-0.06	0.05	0.78	0.44		

Note: sample size n=171

R=.36, R-square=.13

Regression Model 2

This model related a leader's influence (dependent variable) to her self-awareness, self management, cultural motivation, and cultural behavior. The overall model significance (Sig (p)) shows that exploratory variables together have a positive effect on the influence of a leader. When evaluating the variables independently, self-management, cultural motivation and cultural behavior did not show a positive effect on the influence of a leader (see Table 9).

Table 9. *Regression Analysis with Dependent Variable of Leadership (Influence)*

Independent Variables	Standardized Coefficients		t	Sig (p)	F	Sig (p)
	Beta	Std Error				
(Constant)		0.39	5.73	0.00	10.96	0.00
Self-awareness	0.40	0.08	5.01	0.00		
Self-management	0.08	0.08	1.07	0.29		
Cultural Motivation	0.07	0.06	0.87	0.38		
Cultural behavior	0.07	0.05	-0.90	0.37		

Note: sample size n=171

R=.46, R-square=.21

Regression Model 3

This model related a leader's inspiration (dependent variable) to his self-awareness, self-management, cultural motivation, and cultural behavior. The overall model significance (Sig (p)) shows that exploratory variables together have a positive effect on the inspiration of a leader. When evaluating the variables independently, only self-awareness has a positive effect on a sense of feeling an inspiration in leaders (see Table 10).

Table 10. *Regression Analysis with Dependent Variable of Leadership (Inspiration)*

Independent Variables	Standardized Coefficients			t	Sig (p)	F	Sig (p)
	Beta	Std Error					
(Constant)		0.44		4.18	0.00	10.94	0.00
Self-awareness	0.35	0.09		4.47	0.00		
Self-management	0.09	0.09		1.17	0.24		
Cultural Motivation	0.12	0.07		1.54	0.13		
Cultural behavior	-0.01	0.06		-0.03	0.97		

Note: sample size n=171

R=.46, R-square=.22

Regression Model 4

This model related a leader's stimulation (dependent variable) to her social awareness, relationship management, cultural knowledge and cultural strategy. The overall model significance (Sig (p)) shows that exploratory variables together have a positive effect on the stimulation of a leader. When evaluating the variables independently, relationship management and social awareness have a positive effect on stimulation (see Table 11).

Table 11. *Regression Analysis with Dependent Variable of Leadership (Stimulation)*

Independent Variables	Standardized Coefficients		t	Sig (p)	F	Sig (p)
	Beta	Std Error				
(Constant)		0.43	2.31	0.02	15.13	0.00
Social awareness	0.34	0.10	4.10	0.00		
Relationship management	0.23	0.07	3.10	0.02		
Cultural Knowledge	0.03	0.07	0.40	0.69		
Cultural Strategy	0.06	0.07	0.76	0.45		

Note: sample size n=171

R=.52, R-square=.27

Regression Model 5

This model related a leader's consideration (dependent variable) to his social awareness, relationship management, cultural knowledge, and cultural strategy. The overall model significance (Sig (p)) shows that exploratory variables together have a positive effect on the consideration of a leader. When evaluating the variables independently, three of the four variables (social awareness, relationship management and cultural knowledge) have some positive effect on consideration (see Table 12).

Table 12. *Regression Analysis with Dependent Variable of Leadership (Consideration)*

Independent Variables	Standardized Coefficients		t	Sig (p)	F	Sig (p)
	Beta	Std Error				
(Constant)		0.38	3.55	0.00	20.53	0.00
Social awareness	0.24	0.09	3.11	0.00		
Relationship management	0.26	0.07	3.66	0.00		
Cultural Knowledge	0.26	0.06	3.19	0.00		

Cultural Strategy	-0.02	0.06	-0.30	0.77
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Note: sample size n=171

R=.58, R-square=.33

Following Hypothesis 1, results show that self-management is related to transformation leadership variables. This behavior is also exhibited by self-management when related to charisma. Results show that influence and inspiration are not significantly related to the dependent variables. All emotional intelligence variables were found to be significantly related to the transformational leadership variables.

Self-dimension of cultural intelligence Hypothesis 1 results show that cultural motivation and charisma are related. On the other hand, cultural motivation and cultural behavior with influence and inspiration are not associated. Following Hypothesis 2, cultural intelligence social dimension, regression analysis found that the relationship between cultural knowledge and cultural strategy with stimulation is not positive or statistically significant. Results also show that there is no relationship between cultural strategy and consideration. The social dimension skill of cultural knowledge, Hypothesis 2, is only related to the transformational skill variable of consideration. The other cultural intelligence variables within the social dimension are not related to transformational leadership variables in this area.

Discussion

Relationship between Transformational Leadership and Emotional Intelligence

Results from this study support previous findings (Barling, *et al.*, 2000; Dasborough & Ashkanasy, 2002; Gardner & Stough, 2002) showing a direct relationship

between emotional intelligence and transformational leadership skills. Barling *et al.*, (2000) demonstrated that EQ was positively related to the three components of transformational leadership: idealized influence, inspirational motivation, and individualized consideration. The highest correlations were found between emotional intelligence and inspirational motivation, suggesting that the understanding of emotions is particularly important to leadership effectiveness (Gardner & Stough, 2002). This study's findings support this conclusion but found the highest correlation was between self awareness and consideration.

Gardner and Stough's (2002) study results found a strong positive relationship between transformational leadership and total emotional intelligence scores. All components of transformational leadership correlated positively with the components of emotional intelligence. Understanding of emotions was the strongest predictor of transformational leadership, followed by emotional management, which emerged as the strongest predictor of inspirational motivation and intellectual stimulation.

The research findings agree with Gardner and Stough's (2002) findings. All emotional intelligence and transformational leadership variables correlated positively but in this case the strongest predictor of transformational leadership was self-awareness.

Relationship between Transformational Leadership and Cultural Intelligence

Until this study, there was no research on the relationship between transformational leadership and cultural intelligence skills. This study thus makes a contribution towards the leadership field. Results show that within the social dimension of a leader, all cultural intelligence skills are correlated with the transformational

leadership skills. This means that a leader's social dimension can be influenced by his/her cultural intelligence skills. However, within the self-dimension of a leader, two of the three self dimension leadership variables showed no correlation with CQ-cultural behavior.

Transformational leadership self-dimension variables did not show correlation with CQ-cultural strategy of the social dimension. Study results show that cultural intelligence skills have no relationship with a leader's self-dimensions skills. If we view the variables relationship within the frame of this study's proposed model, we can conclude that there are only two sub-constructs that do not correlate with leadership: CQ-cultural behavior with charisma and influence. However, if we look into all the possible relationships that can exist among cultural intelligence and transformational leadership, we can conclude that a leader's skills of CQ-cultural behavior and CQ-cultural strategy are not influenced by a leader's self dimension capabilities. In conclusion, cultural intelligence capabilities are related to leadership skills within the social dimension of a leader but not much within his/her self-dimension.

Relationship between Cultural and Emotional Intelligences

Earley and Ang (2003) concluded that the most important difference between CQ and EQ is that emotional intelligence presumes a degree and familiarity with a culture context that does not exist. This study suggests that a direct relationship exists between almost all sub-constructs of emotional and cultural intelligence. This means that a relationship between emotional and cultural intelligences does exist, but there are two

areas that are not correlated: CQ-cultural strategy with self awareness and CQ-cultural-behavior with relationship management.

This lack of correlation among these variables supports previous statements by Earley and Peterson (2004) and Earley and Mosakowski (2005) that CQ and EQ were not related. With the findings of this study, we can now conclude that there are only two relationships that do not exist between emotional and cultural intelligences. The generalization that emotional and cultural intelligences are not related is not valid.

There is a relationship between emotional and cultural intelligences, but when we talk about the ability of leaders to make sense of inter-cultural experiences and to adapt to verbal and non-verbal behavior appropriate to different cultures; their emotional intelligence skills do not help them achieve success in these areas. Earley and Peterson (2004) stated that a person who has high emotional intelligence in his or her native culture may be entirely incapable of generalizing emotional intelligence across cultural settings. This is a true statement according to our study findings. Results validate this statement by not finding a correlation between CQ strategy and self-awareness. This means that a leader's self-awareness does not interfere in a leader's skill of making sense of inter-cultural experiences.

In 2005, Earley and Mosakowski stated that CQ is related to EQ but picks up where EQ leaves off since it is the “seemingly natural ability for a cultural outsider to interpret someone’s unfamiliar and ambiguous actions or gestures the way that person’s cultural peers would” (p. 139). This study shows that this assertion is true. Study findings show that there is no correlation between CQ-behavior and relationship management. This means that a leader’s ability to adapt to verbal and nonverbal behavior

appropriate to different cultures is not influenced by his/her ability to use personal and others' awareness of emotions to manage interactions successfully.

Relationship between CQ and EQ with TL

Alon and Higgins (2005) recognized the importance of EQ and CQ for global leadership success. They concluded that "increasing globalization would make possessing EQ and CQ skills more relevant for entire organizations" (p. 503). Another study by Gabel *et al.*, (2005) examined how EQ could be a predictor for cultural adjustment for success in global or international management assignments. The study found that cultural differences are related to EQ but not to adjustment to the new culture and country. The findings suggested that EQ is a critically needed skill for adjustment and success with international assignments.

Results of this study show that there is a relationship among these three constructs. Emotional intelligence is related to all transformational leadership skills; cultural and emotional intelligences are related within the social dimension of a leader with not much relationship within his/her social dimension; and, among all constructs, we can conclude that mostly all skills are related. In summary, the global transformational leader should have influence, inspiration, consideration, relationship management, self awareness, self management, cultural motivation, stimulation, and cultural knowledge.

The Model for the Development of The Global Transformational Leader

As stated, the present study results support the model 83.3 percent; therefore the validated model will look as follows (see Figure 1).

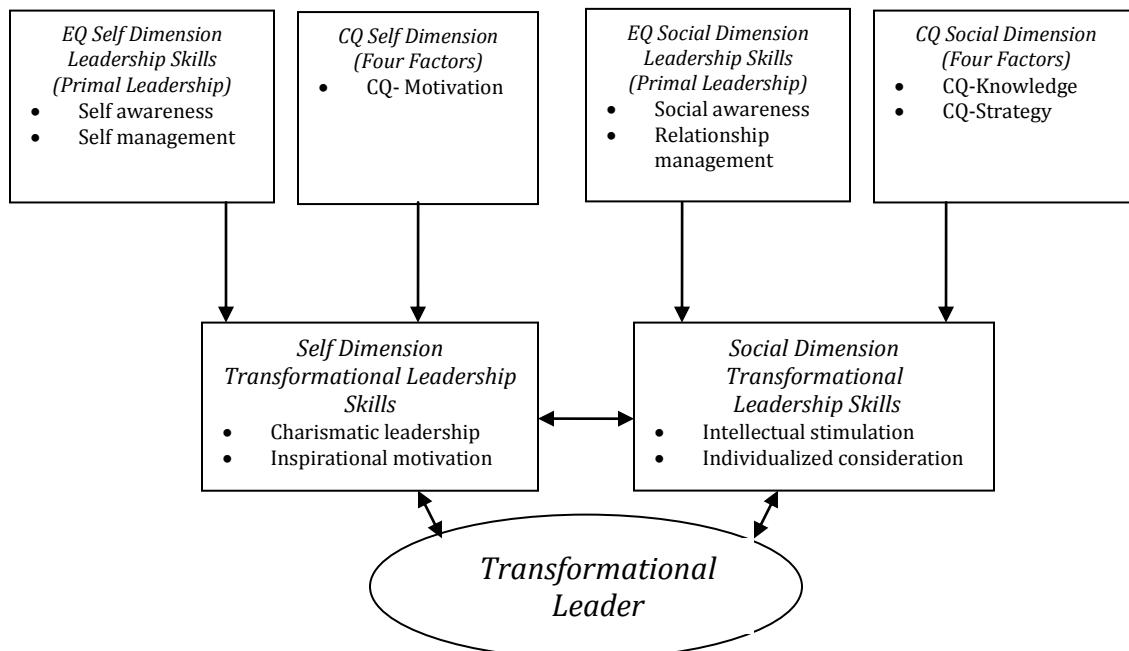


Figure 1. Revised model for the development of the global transformational leader.

This model presents a new leader who can transform the organization, understand people's emotional needs, and is successful in cross-cultural assignments or teams. The most important skills of this leader are influence and inspiration, stimulation and consideration, consideration and self and social awareness, charisma and influence, inspiration and consideration, and stimulation and social awareness.

A global transformational leader needs to be charismatic, influential, inspirational, stimulating, considerate, and must also possess self-awareness, self-management, social awareness, relationship management, cultural motivation, cultural knowledge, and cultural strategy in order to be successful. The leader's ability to adapt to verbal and

nonverbal behavior appropriate to different cultures does not depend on his/her leadership or emotional intelligence capabilities.

This study has several limitations that might have influenced its results. First, the population of this study is not homogeneous when we compare the number of cases from different countries. There were not sufficient cases from each country to affect the results. Having so many different ethnic groups might have produced variance. Although the sample was larger than expected, it needed to be bigger for us to draw better conclusions.

Other limitations include the fact that the sample population was from the same school, which had a hospitality curriculum, and the majority of the sample had lived in Switzerland for under one year. A sample without much work or intercultural experiences might have produced variance in the results. Findings of this study cannot be generalized because of the nature of the sample population. Recommendations for practice include creating training and education modules that include the development of transformational leadership skills with emotional and cultural intelligence skills as validated by this study.

Business schools should incorporate within their curriculums training courses focused on leadership development within a context of global leadership success. These curriculum and training modules should incorporate active learning techniques so that participants have the opportunity to relate to theory and practice and acquire the needed skills. Practitioners and managers should conduct other studies in the same fashion as this study to determine if the results of this study can be generalized. Another study should include a larger population, possibly from different schools or populations within a university and controlling the number of cases from each country.

Results of this study can serve as underpinning theory to foster the development of a more holistic and systematic approach for training global leaders that incorporates cultural and emotional competencies needed to function and flourish in an increasingly complex global economy. This research makes a significant contribution to the leadership field because it concludes that there is a relationship among transformational leadership and emotional and cultural intelligence. The revised model can be used as a guide to develop successful tools for educators, trainers, and students working within the modern business world. By incorporating these skills in leadership development programs, future leaders will be more successful within the areas of international business, relocation and assignments.

Concluding Statement

In a shrinking world, educators need to develop new leadership skills abilities that might not have been necessary before. Results of this study suggest that it is possible to develop leaders who have the needed skills to succeed in the new global marketplace. Training future leaders should be based on the development of transformational leaders with emotional and cultural intelligence that are able to understand people's emotions and cultures to lead them effectively. The development of leadership training modules based on this research could help this purpose. Findings have shown that emotional and cultural intelligence are mostly related and that possessing these skills could help a leader be more effective and successful.

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