

# When Do Global Leaders Learn Best to Develop Cultural Intelligence?

## An Investigation of the Moderating Role of Experiential Learning Style

MING LI

ESC Rennes School of Business

WILLIAM H. MOBLEY

University of Macau

AIDAN KELLY

University College Dublin

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*Cultural intelligence is believed to be an important quality for global leaders. To understand how this quality can be developed from international experience, our study employs experiential learning theory to analyze the learning process. We hypothesize that the extent to which the length of overseas work experience contributes to the development of cultural intelligence varies depending on the executives' learning styles. Analyses of data collected from 294 international executives and graduate business students in China and Ireland indicated that the positive relationship between the length of overseas experience and cultural intelligence is strengthened when global executives have a divergent learning style, not when they have an assimilative, convergent, or accommodative learning style.*

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"In the emerging 'global village,' 'multicultural workplace' and in 'multinational empires' where events in places we have barely heard of quickly disrupt our daily work and lives, the dizzying rate of change, and the exponential growth of knowledge all gener-

ate nearly overwhelming needs to learn just to survive" (Kolb, 1984).

In a world that is dynamically globally interconnected in a way we could not have imagined even a decade ago (Adler, 2006), global leaders are vital human assets for companies to implement global strategies (Conner, 2000). Global work is different from domestic work; while the "whats" remain the same, the "hows" are different (McCall & Hollenbeck, 2002). The main source of the differences in "hows" is cultural differences. The capability to manage such cultural differences, therefore, has become one of the important skills for global leaders (Deal, Leslie, Dalton, & Ernst, 2003; Javidan, Teagarden, & Bowen, 2010). *Cultural intelligence* (CQ; Ang et al., 2007; Earley & Ang, 2003; Thomas

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et al., 2008) reflects the abilities to deal effectively with people from different cultural backgrounds. Investment in developing CQ among business leaders in global corporations is strategically important to maintain competitive advantage in a global environment (Ang & Inkpen, 2008; Earley & Peterson, 2004; Rose, Sri Ramalu, Uli, & Kumar, 2010). Thus far, very little research has investigated this topic. Previous research has examined the influence of personality traits (Ang, Van Dyne, & Koh, 2006) and international experience (Crowne, 2008) on CQ. Yet some executives learn from those experiences and some fail to learn. The cost of failure in such learning processes is extremely high (Hill, 2001); however, we know much less about the relationship between learning ability and international experience (Spreitzer, McCall, & Mahoney, 1997). Without understanding more about this relationship, companies cannot make effective use of costly international experience to develop global leadership capability (Kohonen, 2005).

Our work aims to understand learning ability that develops CQ from international experience. This learning is similar to cross-cultural learning skills as outlined by Yamazaki and Kayes (2004) and fits naturally with experiential learning theory (Kolb, 1984; Kolb & Kolb, 2005b). Such exploration of experiential learning theory in the development of global leaders is part of a growing research interest. Very recently, Ng, Van Dyne, and Ang (2009) proposed CQ as a learning capability moderator that enhances the likelihood that individuals actively engage in the four stages of experiential learning (experience, reflect, conceptualize, experiment) to develop global leadership on international assignments. Since Earley and Ang (2003) defined CQ as a dynamic end-state result rather than a born trait, there is a great deal people can do to shape and refine their CQ (Earley, Ang, & Tan, 2006), especially through learning from experience with different cultures (Thomas & Inkson, 2005). To date, this relationship has not been examined. To understand the relationship from both directions is not a simple "chicken and egg" tautology. Rather, it gives us the opportunity to understand the influence of fundamental individual differences such as learning style (Kolb, 1984; Kolb & Kolb, 2005b) in the development of CQ in global leaders, and hence, advances our knowledge of management learning. The study is also valuable for further refinement in the conceptualization and measurement of the newly developed CQ concept. The results will inform business executives regarding the ways of accelerating their learning to develop CQ and inform organizations regarding

the methods to select and develop their global talent.

We begin with an analysis of the impact of international experience on cultural intelligence with a focus on overseas work experience. This is followed by a discussion of international experience as a unique learning context. Employing experiential learning theory, we analyze how executives go through the four learning modes of the experiential learning cycle to develop CQ. Then, we examine the impact of four experiential learning styles on the development of CQ. The theoretical model proposed here is shown in Figure 1. We then report our empirical test of this model; this is the first attempted test of a relationship between experiential learning theory and CQ.

## THEORY DEVELOPMENT

### Cultural Intelligence and International Experience

According to Earley and Ang (2003), cultural intelligence (CQ) has both process and content features. They defined the general structure of CQ as consisting of three facets, namely, cognitive, motivational, and behavioral elements. *Cognitive CQ* is a person's ability to develop patterns from cultural cues, drawing from both cognitive and metacognitive abilities. *Metacognitive ability* refers to the processes individuals use to acquire and understand cultural knowledge, including knowledge of and control over their thought processes. It happens when people form strategies before an intercultural encounter, check assumptions during an encounter, and adjust mental maps when actual experiences are different from expectations. *Cognitive CQ* is the knowledge of the norms, practices, and conventions in different cultures. It includes general knowledge structures and mental maps about cultures that include information about economic, legal, and social systems of different cultures (Triandis, 1994). With this knowl-

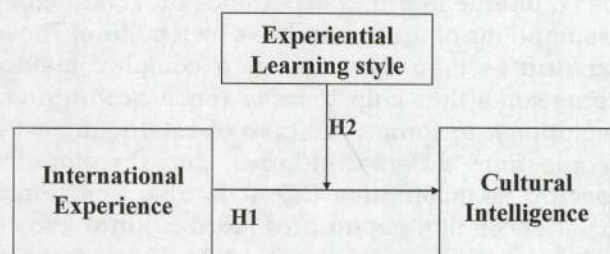


FIGURE 1  
The Role of Experiential Learning on the Development of Cultural Intelligence

edge, individuals can understand both similarities and differences among cultures. *Motivational CQ* is a person's interest in experiencing other cultures and interacting with people from different cultures. It includes not only the intrinsic value people place on interactions with people from different cultures, but also their belief that they can function effectively in those situations. *Motivational CQ* directs, focuses, and applies energy toward learning about and functioning in cross-cultural situations. Individuals with higher *motivational CQ* tend to interact more with people from different cultures. And, when they confront obstacles, setbacks, or failures, their level of interest and confidence also determines how persistently they will seek to learn from relevant experience (Ang et al., 2006). *Behavioral CQ* is a person's ability to appropriately enact selected behaviors in accordance with cognition and motivation, and to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures. *Behavioral CQ* requires individuals to overcome some deeply held reservations in an unfamiliar situation and try to adopt appropriate behaviors to interact with people from different cultures (Earley & Ang, 2003). This adaptability of behaviors significantly helps executives improve communication effectiveness, build relationships with others, and lead in a global context.

International experience has been recognized as the primary vehicle for developing global leadership skills (Jokinen, 2005; McCall & Hollenbeck, 2002). It provides cultural exposure (Crowne, 2008) to develop cultural intelligence. As one of the most intense international experiences, overseas work experience, such as the expatriate experience, has been the focus of much prior research (e.g., Aycan, 1997; Black & Gregersen, 1991; Morley, Burke, O'Regan, & Inwood, 1997; Waxin, 2004; Yamazaki & Kayes, 2004). Entering a new culture is often a confusing and disorienting experience, and expatriates are likely to experience culture shock after a few months in a new culture (Adler, 2002). While others might look at culture shock as a barrier, it is also a unique learning experience that challenges assumptions of the expatriate's own culture. Those expatriates then develop more complex mental frameworks that help them to reach accurate expectations, to form strategies of interacting with people from different cultures, and therefore, to develop metacognitive CQ. It is also from these experiences that expatriates learn cultural knowledge about different economic, legal, and social systems (cognitive CQ). McCall and Hollenbeck (2002) also documented in their research that one of the changes global executives felt over the course

of their global careers was an increase in self-confidence. Even though it is likely that executives with high self-confidence and self-efficacy (Bandura, 1997) tend to take challenging international assignments, it is also important to recognize that individuals do develop their confidence and efficacy through international experience as new information and experience are acquired (Gist & Mitchell, 1992), in other words, *motivational CQ*. Knowledge and motivation will never be sufficient to be effective in interacting with people from different cultural backgrounds if the actual behavior that is required in certain situations is not displayed. The complexity of intercultural behavior is such that even if people know what they should do and have the necessary motivation, they do not always enact the behaviors. Behavior changes take time and *behavioral CQ* inevitably takes time and practice; global executives are expected to develop their *behavioral CQ* from day-to-day happenings in their overseas work experience. It is likely the longer the overseas work experience, the higher level of CQ international managers will develop.

*Hypothesis 1: The length of overseas work experience is positively related to the level of CQ of international managers.*

### **Experiential Learning Theory and Cultural Intelligence**

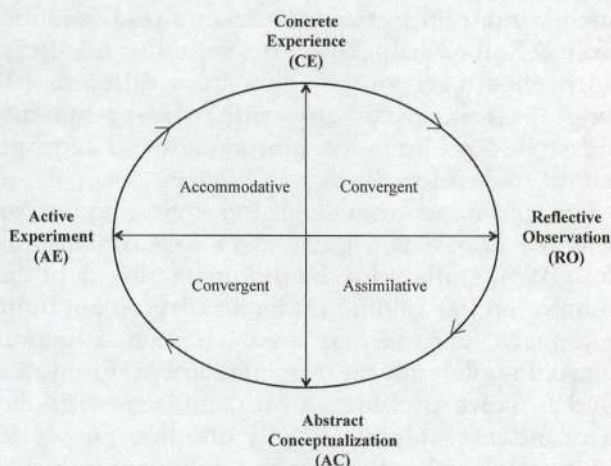
Experience accounts for over 70% of individual development (Morrison & Brantner, 1992). Evidence that people benefit differently from experience has also been confirmed in research focused on the concept of action learners (Allen & Young, 1997; Bunker & Webb, 1992). Global leadership is also a process of learning from international experience, and global executives learn differently from similar international experiences (McCall & Hollenbeck, 2002). To develop cultural intelligence, one "must progress through a series of stages ranging from simply reacting to external stimuli to adjusting behavior in anticipation of subtle changes in cultural context. While there are numerous ways to accomplish this goal, including formal education and training, experiential learning is key to increase CQ" (Thomas & Inkson, 2005: 5).

### **Experiential Learning Theory (ELT)**

Drawn from the foundational "theory of experience" of Dewey (1938) and Lewin (1951), experiential learning is defined by Kolb (1984) as the process whereby knowledge is created through the transformation of experience. It emphasizes the

central role that experience plays in the learning process and regards learning as a holistic process of adaptation to the world, which involves the integrated functioning of the total organism—thinking, feeling, perceiving, and behaving. Kolb's experiential learning theory (1984) remains one of the most pervasive theories about how managers learn from experience (Hoover, Giambatista, Sorenson, & Bommer, 2010; Kayes, 2002; Yamazaki & Kayes, 2004).

Kolb defined learning as "the process whereby knowledge is created through the transformation of experience, [and] knowledge results from the combination of grasping and transforming experience" (Kolb, 1984: 41). Two fundamental processes, "grasping the experience" and "transforming the experience," are both essential for learning. Kolb further defined two dialectically related modes of grasping experience, namely concrete experience (CE) versus abstract conceptualization (AC): CE relies on the tangible and immediately felt qualities of the experience, while AC relies on conceptual interpretation and symbolic representation of the experience. The two dialectically related modes of transforming experience are reflective observation (RO) versus active experimentation (AE): RO transforms through internal processing, while AE transforms through actual manipulation of the external world. Kolb presents the experiential learning cycle of these four experiential learning modes (see Figure 2). The figure shows how immediate concrete experience serves as the basis for observation and reflection, in which the experience is subsequently assimilated into abstract conceptualization, and then formed into active experimentation with the world.



**FIGURE 2**  
Experiential Learning Cycle and Experiential Learning Style (Adapted with permission from Kolb et al., 2000)

Active experimentation both completes the cycle of learning and ensures that it begins anew by assisting the creation of new experiences (Kolb, 1984; Kolb & Kolb, 2005a).

Ideally learners can "touch all the bases"—experiencing, reflecting, thinking, and acting—to learn from experience. However, in reality, few if any individuals can do so (Kolb, 1984). Through different social and learning experiences, they resolve the conflicts between being active (AE) and reflective (RO), and between being immediate (CE) and analytic (AC), and develop over time a unique possibility-processing structure of learning that emphasizes the four different learning modes (Kolb, 1984). Based on the extent of emphasis on these four experiential learning modes—CE, RO, AC, and AE, Kolb (1984) named and defined four learning styles—divergent, convergent, assimilative, and accommodative. The matching between learning context and learning style leads to enhanced learning performance (Kolb & Kolb, 2005b).

### *International Experience as a Learning Context*

International experience is a unique and crucial learning context. It can occur in many forms including encounters with individuals from different cultures, short visits to international divisions, and long-term immersion in a new host culture. Overseas work experience is one of the most intensive international experiences. In this learning environment, there are many learning opportunities that international managers can be involved in, including one-on-one interactions with individuals, professional events, and social engagements. The knowledge that can be acquired from overseas work experience is not only the content knowledge about a specific cultural domain (Thomas et al., 2008), but also tacit knowledge which is not explicit and must be acquired in the absence of direct instruction, and gained through practical experience and observation in various contexts (Grotenhuis & Weggeman, 2002). It often involves highly confusing cultural issues (Osland & Bird, 2000) and an emotional cultural shock experience (Adler, 2002). During the experience in a different culture, executives cycle through the four experiential learning modes to develop their CQ. The immediate cultural experience serves as the basis for observation and reflection, in which the cultural experience is subsequently assimilated into cultural knowledge, and then formed into active experimentation toward forming culturally appropriate behaviors.

Concrete experience (CE) starts the executives' learning cycles. The level of their engagement in

international cultural experience depends on their ability to employ feelings in those experiences and the ability to cope with unstructured and ambiguous situations (Kolb, 1984). Concrete experience enables individuals to grasp knowledge, relying on tangible and immediately felt qualities of the experience with different cultures, also being sensitive toward other peoples' emotions and values, and dealing with encounters with culturally different individuals in a personable way (Kolb, 1984). Knowledge from concrete cultural experience (CE) is then processed by reflective observation (RO) to uncover how and why things happen in different ways. Reflective observation enables individuals to look at things from different perspectives and appreciate different points of view (Kolb, 1984), to suspend judgment until multiple cues can be assessed (Triandis, 2006), and to critically reflect and challenge personal assumptions built on prior experience and knowledge (Taylor, 1994). The meaning is then assimilated into new cultural knowledge by abstract conceptualization (AC). Abstract conceptualization enables executives to think through what it means for similar situations in the future and to make systematic plans of what to do in those situations (Kolb, 1984). These plans are executed by active experimentation (AE), which is focused on doing what works in different cultures and taking risks to enact different behaviors to test these ideas and change situations (Kolb, 1984). Active experimentation completes the cycle of cultural learning and also begins it anew by assisting the creation of new cultural experiences (Kolb, 1984; Kolb & Kolb, 2005a).

The extent of emphasis on the four experiential learning modes differs, based on executives' learning styles (Kolb, 1984). When their learning styles fit the context of overseas work experiences, this leads to more effective learning. Abstract conceptualization (AC) is not as critical an experiential learning skill for cross-cultural adaption as CE, RO, and AE (Yamazaki & Kayes, 2004). Executives who prefer AC over CE do not seem to learn effectively from concrete cultural experience because AC grasps knowledge from abstract symbols, such as ideas and concepts from books for example, as opposed to the immediate quality of experience (Kolb, 1984).

### ***Experiential Learning Styles and Cultural Intelligence***

*A divergent learning style* emphasizes concrete experience and reflective observation. The greatest strength of this learning style lies in imaginative ability and the awareness of meaning and values

(Kolb, 1984). Individuals who have this learning style tend to be imaginative and emotional (Kolb & Kolb, 2005b); therefore, they can attach their feelings to the experience and thus can experience particular situations more concretely. In the experience of a new culture, people with this learning style are at their best in viewing concrete situations from many different points of view (Kolb & Kolb, 2005b). Therefore, executives with this learning style will tend to check assumptions and adjust mental maps when actual experiences are different from expectations (metacognitive CQ); they will use different perspectives to understand both similarities and differences among cultures (cognitive CQ). People with a divergent learning style tend to have broad cultural interests; they tend to show high interest for international experience (motivational CQ). They are interested in people from different cultures and are more likely to build relationships with people from different cultures. By gaining different cultural experiences, their perception of self-efficacy can also be enhanced (Bandura, 1997); hence, they possess higher confidence to deal with cultural challenges (motivational CQ). The emphasis in this orientation is on learning by observation rather than by action (Kolb, 1984). People with this learning style have great potential to understand what behaviors are appropriate in different cultural contexts (Phillion, 2002); however, as they are less active in taking actions, they may not be as proficient in applying these behaviors. Nonetheless, it has been suggested that the measure of CQ is concerned more with acquiring appropriate behaviors than with applying them in real-life situations (Johnson, Lernartowicz, & Apud, 2006). People with this learning style also prefer to work in groups, to listen with an open mind, and to receive personalized feedback (Kolb & Kolb, 2005b). These are qualities needed to work effectively with people from different cultures. Overall, an executive with a divergent learning style does have the prerequisites or high potential to develop all four CQ facets.

*The accommodative learning style* emphasizes concrete experience and active experimentation. Kolb (1984) stated that the greatest strength of this orientation lies in doing things, carrying out plans and tasks, and getting involved in new experiences. People with an accommodative orientation tend to solve problems in an intuitive trial-and-error manner, relying heavily on other people for information rather than on an analytic or reflective ability. It is best suited for those situations where one must adapt to changing circumstances. Therefore, executives with this learning style tend to get involved in new cultural experiences and be flex-

ible in their behaviors for dealing with different cultural situations (behavioral CQ). However, although people with an accommodative learning style are generally at ease with people, they are sometimes seen as impatient, pushy, and lacking in reflection (Kolb, 1984). Their pushiness may cause defensiveness from people with a different cultural background, and their impatience may cause them to withdraw from cultural experiences that are frustrating. Their lack of reflection may also lead executives to resort to convenient explanations and make rash conclusions (Ratiu, 1983), and therefore, be unable to comprehend deep cultural meanings in their experiences. In consequence, as they may not understand the most appropriate behaviors in those cultural contexts, they simply mimic others' behaviors, which could be perceived as insincere (Thomas & Ravlin, 1995). Armstrong and Mahmud's study (2008) found the accommodative learning style the most effective among the four learning styles in acquiring managerial tacit knowledge from managerial work experience. Since there is a large part of cultural knowledge that is tacit, this learning style may be effective in acquiring cultural knowledge, which means higher cognitive CQ. Overall, this learning style seems to be a double-edged sword, incorporating both strengths and weaknesses for the development of CQ.

An *assimilative learning style* emphasizes abstract conceptualization and reflective observation. The greatest strength of this style lies in inductive reasoning and the ability to create theoretical models in assimilating disparate observations into an integrated explanation (Kolb, 1984). It seems that this learning style will help global executives assemble different observations into an integrated form of cultural knowledge, and hence, the development of higher cognitive CQ from experience. However, this learning style is less focused on people. Instead, it is more concerned with ideas and abstract concepts (Kolb, 1984); therefore, executives with this learning style do not seem to possess high motivational CQ to be involved with people from different cultures, a major source of cultural knowledge (cognitive CQ). This learning style does not seem to have particular strengths in the development of CQ.

The *convergent learning style* relies primarily on the dominant learning abilities of abstract conceptualization and active experimentation. The greatest strength of this approach lies in problem solving, decision making, and the practical application of ideas (Kolb, 1984). This learning style has similar characteristics to the assimilative learning style in that the preference is for dealing with technical

tasks and problems rather than social and interpersonal issues. Hence, executives with this learning style are less likely to acquire cultural knowledge from their interaction with people. They are more likely to acquire cultural knowledge from secondary sources such as films, readings, and formal training sessions. When these sources teach the right behaviors, individuals with a convergent learning style can rigorously implement what they have learned. However, these secondary sources may lead to stereotypical expectations about a particular culture. When individuals and situations deviate from what is expected or assumed, it can cause frustrating experiences. Executives with this learning style emphasize thinking, testing actions, and searching for explanations; these seem to be helpful in developing metacognitive CQ. However, if the data they pick up from new experiences is used to confirm what they have already known, then this learning style may facilitate forming and reinforcing cultural stereotypes (Ratiu, 1983). They have the ability to solve problems and make decisions based on finding solutions to questions or problems (Kolb & Kolb, 2005b); this seems to lead to higher behavioral CQ. However, people with this learning style value precision, such as with the rigor and discipline of analyzing ideas (Kolb, 1984). They may appear to be judgmental of others' behaviors because of such a tendency, and therefore, tend to have low behavioral CQ. Moreover, people with this learning style should be more effective in specialist and technology careers, not a management career (Kolb, 1984). In general, this learning style does not appear to be helpful in the development of CQ.

Overall, individuals vary in their ability to learn from their international experiences. The positive relationship between the length of overseas work experience and cultural intelligence, which is proposed in Hypothesis 1, is influenced by the experiential learning style. It appears that a divergent learning style fits the context of the overseas work experience, and is the most positive among the four learning styles for the development of CQ. The assimilative, convergent, and accommodative learning styles have both positive and negative learning characteristics for the development of CQ; their impacts on CQ are therefore uncertain. Taken as a whole, we propose the following:

*Hypothesis 2: Experiential learning styles moderate the level of CQ developed by global executives from their international experience. The positive relationship between the length of overseas experience and CQ is strengthened when global execu-*

tives have a divergent learning style, not when they have an assimilative, convergent, or accommodative learning style.

## METHODS

### Samples and Data Collection

To test the hypotheses, data were gathered from business managers representing different cultures and having had different exposures to international work experiences. We selected international managers from an Asian country, China, and a Western country, Ireland, for this study. The sampling frame comprises 350 business managers from three multinational companies in China and 250 expatriates in one expatriate association in Shanghai. We also sent surveys to 115 MBA students (including international MBA students) in one of the leading business schools in China and 100 postgraduate business students in the principal business school in Ireland. The MBA and international postgraduate business students in our sample either had work experience prior to their study or were working while they undertook their studies part time. All had exposure to different cultures from either working or studying abroad, or from working in a multinational company.

Two hundred and ninety-four participants completed the survey, representing a response rate of 36%. Males accounted for 55.8% and females for 44.2% of the final sample. The average age was 31.5 years; more than 73% were above 28 years old and likely have over 5 years' work experience. Thirty-one different nationalities were represented in the sample: 175 respondents from China, 45 from Ireland, 16 from the United States, 21 from Europe, and the remainder from 16 other countries. Ninety-

two percent held a bachelor or master's degree. At the time they completed the survey, 64% of the participants were business professionals, and 36% were undertaking business education. Forty-one percent had, or were currently engaged in, overseas work experience; and 10% had overseas experience of over 5 years. As shown in Table 1, they represented various managerial functions and positions. Among those who reported as executives ("department/unit manager," "director," "divisional/function head," "general manager/senior executive," "managing director/chief executive"), 48% had overseas work and about 13% had overseas experience of over 5 years. Among the rest who can be regarded as a "potential executives" group, 29% had overseas work experience, and about 6% had overseas experience of over 5 years. The percentage of executives and potential executives in the business professionals and graduate students groups were identical.

We adopted a web-based survey utilizing [www.surveymonkey.com](http://www.surveymonkey.com), and an invitation e-mail with the survey link was sent out to human resource departments in multinational companies, the coordinator of the expatriate association, and lecturers in business schools. Respondents were guaranteed confidentiality in the invitation e-mail. We designed both English and Chinese versions of the on-line survey in order to reach our target respondents. For the Chinese survey, we asked the providers of the instruments to send us their Chinese version survey that had been tested in other research. The Cultural Intelligence Center (CQC) provided the CQ measure in Chinese. For the learning style and international experience questions, we had English-Chinese bilingual professionals provide translation from the first version and back to the original language of the questions.

TABLE 1  
Job Background of Survey Participants

Job function	N	%	Cumul. %	Job level	N	%	Cumul. %
	5	1.7	2		4	1.4	1
Accounting/finance	39	13.3	15	Administrative and clerical	32	10.9	12
Administration/operation	33	11.2	26	Department/unit manager	57	19.4	32
Customer service	6	2.0	28	Director	19	6.5	38
Data processing/systems	6	2.0	30	Divisional/functional head	14	4.8	43
Distribution/fulfillment	7	2.4	33	General manager/senior executive	19	6.5	49
Human resource/personnel	15	5.1	38	Managing director/chief executive	11	3.7	53
Manufacturing	14	4.8	43	Not applicable	35	11.9	65
Marketing/sales	84	28.6	71	Professional and technical	55	18.7	84
Not applicable	42	14.3	85	Supervisor/foreman	48	16.3	100
Research/development	7	2.4	88	Total	294	100	
Technical/engineering/research	36	12.2	100				
Total	294	100					

A pretest was run with a small subsample of 10 respondents to detect problems in the on-line survey design. After the pretest, the on-line survey was revised and tried again by two more respondents to make sure that there were no problems with completing the survey on-line.

## Measures

### Dependent Variable

**Cultural intelligence.** We employed the 20-item inventory developed by Ang et al. (2007) to measure cultural intelligence. Each item was scored on a 7-point Likert scale from "1 = *strongly disagree*" to "7 = *strongly agree*." The inventory includes four items to measure metacognitive CQ ( $\alpha = 0.77$ ), six items for cognitive CQ ( $\alpha = 0.85$ ), five items for motivational CQ ( $\alpha = 0.79$ ), and five items for behavioral CQ ( $\alpha = 0.76$ ). Sample items include "I check the accuracy of my cultural knowledge as I interact with people from different cultures" for metacognitive CQ; "I know the rules for expressing nonverbal behaviors in other cultures" for cognitive CQ; "I enjoy interacting with people from different cultures" for motivational CQ; and "I change my nonverbal behavior when a cross-cultural situation requires it" for behavioral CQ.

### Independent Variables

**Learning style.** Learning style was measured by the latest version of the Kolb Learning Style Inventory Version 3.1 (KLSI 3.1; Kolb & Kolb, 2005a). The KLSI 3.1 is a forced-choice 12-item inventory that ranks an individual's relative choice preferences among the four learning modes—CE, RO, AC, and AE. For example, a sample item might be "I learn best when," and the answer choices given are "I listen and watch carefully," "I rely on logical thinking," "I trust my hunches and feelings," and "I work hard to get things done." Participants were asked to rank these four choices with "4 = *most like you*," "3 = *second most like you*," "2 = *third most like you*" and "1 = *least like you*." Four primary scores CE ( $\alpha = 0.73$ ), RO ( $\alpha = 0.77$ ), AC ( $\alpha = 0.80$ ) and AE ( $\alpha = 0.72$ ) were calculated based on the forced ratings of the 12 questions. Then two combination scores were calculated that measure an individual's preference for abstract conceptualization over concrete experience (AC-CE) and active experimentation over reflective observation (AE-RO). The learning style was decided by these two scores based on the Learning-Style Type Grid (version 3.1) provided by the Hay Group. We created four dichotomous learning style variables—convergent,

assimilative, divergent, and accommodative with values "1 = yes, 0 = no."

**International experience.** Respondents were asked to answer the following questions:

1. Do you have overseas work experience? Answer "0" represents "No" and answer "1" represents "Yes."
2. Totally how many months did you work overseas?

### Control Variables

Bennett (2004) refers to people born into multicultural families as the *cultural margin*, who are comfortable switching between relative perspectives of different cultures and have a sufficiently complex self-concept enabling the flexibility needed for CQ (Earley & Ang, 2003). Females tend to be more empathetic than males (Toussaint & Webb, 2005); thus, females are more likely to accurately perceive the internal frame of reference of another person and nonverbal communication; they are more likely to understand different cultures. Older participants may have more exposure to different cultures and as a consequence develop higher CQ. People who receive more education may develop more comprehensive frameworks to appreciate different cultures and develop CQ. Ethnicity captures more important elements of demographic difference beyond national origin (Olsen & Martins, 2009), and individuals have an implicit perception of the hierarchical ordering of certain ethnicities (Song, 2004). Those from higher order ethnicities may perceive themselves as possessing higher level of CQ. Hence age, gender, educational background, parents of different nationalities, and ethnicity were included as control variables in the analysis.

### Common Method Variance

Since the data for CQ, learning style, international experience, and other control variables for this study were collected on the same survey, there is a potential for common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This potential problem was examined by conducting Harman's one-factor test in which all the variables in our study were simultaneously entered into an exploratory factor analysis (Podsakoff et al., 2003). Four factors were extracted, accounting for 67.5% of the variance, with factor one accounting for 26.5% of the variance. No single factor emerged that accounted for most of the variance.



## Analytical Procedure

Moderated multiple regression analysis (Aiken & West, 1991; Bedeian & Mossholder, 1994) was employed to test the hypotheses. We first mean-centered the variables associated with the interaction terms to reduce multicollinearity problems inherent in higher order terms. Then we ran four independent moderated multiple regression analyses for overall CQ and each learning style. The variance inflation factor (VIF) was examined to identify multicollinearity among the variables in the regression models. Three models were tested under each moderated multiple regression analysis:

Model 1 consisted of only the control variables age, gender, and educational background.

Model 2 added the independent variables international experience (length of overseas work) and four learning style variables (convergent, assimilative, divergent, and accommodative).

Model 3 added the moderating variables (International Experience  $\times$  Divergent, International Experience  $\times$  Assimilative, International Experience  $\times$  Convergent, and International Experience  $\times$  Accommodative) of the two independent variables.

The significance of the interaction effects was tested by the *t* test of the coefficients of interaction terms and *F* test of the models with added interaction terms (Aiken & West, 1991). Then, if the interaction effect of a specific learning style was significant, we also ran a moderated multiple regression analysis of this learning style on the four facets of CQ to test its role in the development of all four facets of CQ in a post hoc analysis.

## RESULTS

Table 2 presents the descriptive statistics and correlations for all variables in this study. Tables 3, 4, 5, and 6 summarize the results of the moderated multiple regression analyses of the four learning styles on the relationship between the length of overseas experience and overall CQ. The VIF values of the variables for all regression models were between 1.02 and 1.34, indicating multicollinearity was not a concern. We first tested whether the length of overseas experience was positively related to overall CQ (Hypothesis 1). As shown in these four tables, in models 2, 3, 5, 6, 8, 9, 11 and 12, the length of overseas experience was significantly related to overall CQ ( $b_2 = 0.193$ ,  $b_3 = 0.149$ ,  $b_5 = 0.193$ ,  $b_6 = 0.241$ ,  $b_8 = 0.194$ ,  $b_9 = 0.173$ ,  $b_{11} = 0.182$ ,  $b_{12} = 0.239$ ,  $p < .01$ ). These results provide support for Hypothesis 1.

We then tested whether learning styles moderate the level of overall CQ developed by global executives from their overseas work experience. Specifically, we expected the positive relationship between the length of overseas work experience and CQ to be more positive when global executives have a divergent learning style. Table 3 indicates the interaction of the length of overseas work experience and divergent learning style (International Experience  $\times$  Divergent) was positive and significant for overall CQ.

Tables 4, 5 and 6 indicate that the interactions of length of overseas work experience with the other three learning styles (International Experience  $\times$  Assimilative, International Experience  $\times$  Convergent, and International Experience  $\times$  Accommodative) were not statistically significant for overall CQ. Therefore, these three learning styles neither strengthen nor weaken the positive relationship between the length of overseas work experience and CQ. Consequently, Tables 3, 4, 5 and 6, jointly support Hypothesis 2.

To further probe the results, we plotted the interaction effects using Aiken and West's (1991) procedure as shown in Figure 3. Simple slopes suggested that CQ is more positively related to the length of international experience when individuals have a divergent learning style, in comparison with other learning styles.

## Post Hoc Analysis

To understand the impact of divergent learning style on the four facets of CQ, we ran four moderated multiple analyses of divergent learning style on four facets of CQ, respectively. As shown in Table 7, the interaction of the length of overseas work experience and divergent learning style (International Experience  $\times$  Divergent) was positive and significant for all four CQ facets. These results are consistent with what Table 3 presents, that divergent learning has a positive moderating effect on all four CQ facets, thus providing further evidence that divergent learning style strengthens the positive relationship between the length of overseas work experience and CQ. In addition, we ran robustness tests of moderated multiple regression analyses with the two subgroups—executives and potential executives. The results showed there were no significant differences between these two subgroups, and the results supported the main findings. The robustness tests further improved our confidence of our theory and findings.

**TABLE 2**  
**Mean, Standard Deviations, Reliability and Correlations for All Variables Used in This Study (N = 294)**

	M	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
1 Gender				1																					
2 Age	31.46	6.88		-.153**	1																				
3 Education	3.48	0.67		-.171**	.180**	1																			
4 Ethnicity				-.023	-.102	.016	1																		
5 Parents				-.039	.013	.060	.207**	1																	
6 International experience (months)	19.68	47.63		-.089	.352**	.107	-.085	.037	1																
7 CE	26.53	6.35	0.727	.129*	.044	-.071	.069	-.020	-.057	1															
8 RO	27.75	6.63	0.768	.050	-.108	-.076	-.009	.002	-.126*	-.267**	1														
9 AC	32.72	6.96	0.798	-.300**	.143*	.144*	.018	.012	.057	-.580**	-.235**	1													
10 AE	33.20	6.15	0.720	.155**	-.100	-.014	-.082	-.001	.120*	-.092	-.511**	-.299**	1												
11 Divergent	0.25	0.43		.062	-.096	-.067	-.017	-.062	-.138*	.368**	.449**	-.501**	-.279**	1											
12 Assimilative	0.29	0.45		-.120*	.040	-.022	.131*	.117*	.013	-.462**	.392**	.468**	-.480**	-.367**	1										
13 Convergent	0.24	0.42		-.121*	.019	.158**	-.072	-.048	.014	-.302**	-.421**	.394**	.305**	-.330**	-.341**	1									
14 Accommodative	0.23	0.42		.186**	.038	-.066	-.048	-.011	.117*	.411**	-.462**	-.372**	.495**	-.324**	-.335**	-.301**	1								
15 Metacognitive CQ	20.70	3.84	0.766	-.208**	.063	.185**	-.045	.040	.127*	-.042	-.090	.012	.122*	-.123*	-.035	.090	.075	1							
16 Cognitive CQ	25.60	6.41	0.849	-.065	.112	.287**	-.011	.100	.201**	.068	-.069	.008	-.008	-.044	-.031	.012	.067	.566**	1						
17 Motivational CQ	26.48	4.72	0.792	-.192**	.131*	.186**	-.043	.087	.274**	.029	-.119*	-.008	.110	-.061	-.053	.020	.099	.654**	.541**	1					
18 Behavioral CQ	25.31	4.48	0.757	-.188**	.016	.087	.030	.034	.090	.070	-.006	-.026	-.036	.009	-.014	-.004	.010	.701**	.456**	.610**	1				
19 CQ	98.09	16.04		-.184**	.103	.238**	-.019	.084	.217**	.045	-.086	-.003	.048	-.062	-.040	.031	.076	.850**	.820**	.836**	.806**	1			
Valid N (listwise)																									

Note. Two-tailed tests. \*\*  $p < .01$ . \*  $p < .05$ .

**TABLE 3**  
Moderated Multiple Regression Analysis of  
Divergent Learning Style on CQ ( $N = 294$ )

Variable	CQ		
	Model 1	Model 2	Model 3
Gender	-0.151**	-0.143**	-0.136*
Age	0.043	-0.022	-0.028
Education	0.197***	0.190***	0.183***
Ethnicity	-0.039	-0.029	-0.023
Parents		0.084	0.080
International experience		0.193***	0.149**
Divergent		-0.010	0.075
International Experience × Divergent			0.207 <sup>a</sup>
<i>F</i>	5.549***	5.598***	6.384***
$\Delta F$		5.301**	10.559***
$R^2$	0.089	0.122	0.153
$\Delta R^2$		0.033	0.032

Note. CQ = cultural intelligence.

Two-tailed tests. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## DISCUSSION

We examined the role of experiential learning in the development of CQ from international experience, and the extent to which the length of overseas experience contributes to the development of CQ varies depending on individuals' learning styles. Supporting our hypotheses, we found that the length of overseas work experience is positively related to the level of CQ, and that a divergent learning style strengthens this positive relationship, not the other three experiential learning

**TABLE 4**  
Moderated Multiple Regression Analysis of  
Assimilative Learning Style on CQ ( $N = 294$ )

Variable	CQ		
	Model 4	Model 5	Model 6
Gender	-0.151**	-0.149**	-0.148**
Age	0.043	-0.019	-0.017
Education	0.197***	0.188***	0.189***
Ethnicity	-0.039	-0.023	-0.021
Parents	0.085	0.088	0.087
International experience		0.193***	0.241***
Assimilative		-0.052	-0.056
International Experience × Assimilative			-0.086
<i>F</i>	5.549***	5.729***	5.224***
$\Delta F$		5.718**	1.604
$R^2$	0.089	0.124	0.129
$\Delta R^2$		0.035	0.005

Note. CQ = cultural intelligence.

Two-tailed tests. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**TABLE 5**  
Moderated Multiple Regression Analysis of  
Convergent Learning Style on CQ ( $N = 294$ )

Variable	CQ		
	Model 7	Model 8	Model 9
Gender	-0.151**	-0.146*	-0.143*
Age	0.043	-0.022	-0.019
Education	0.197***	0.194***	0.192***
Ethnicity	-0.039	-0.031	-0.028
Parents	0.085	0.083	0.083
International experience		0.194***	0.173**
Convergent		-0.025	-0.023
International Experience × Convergent			0.051
<i>F</i>	5.549***	5.625***	5.003***
$\Delta F$		5.389**	0.689
$R^2$	0.089	0.122	0.124
$\Delta R^2$		0.033	0.002

Note. CQ = cultural intelligence

Two-tailed tests. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

styles. We next discuss the theoretical and managerial implications of our study's findings.

## Theoretical Implications

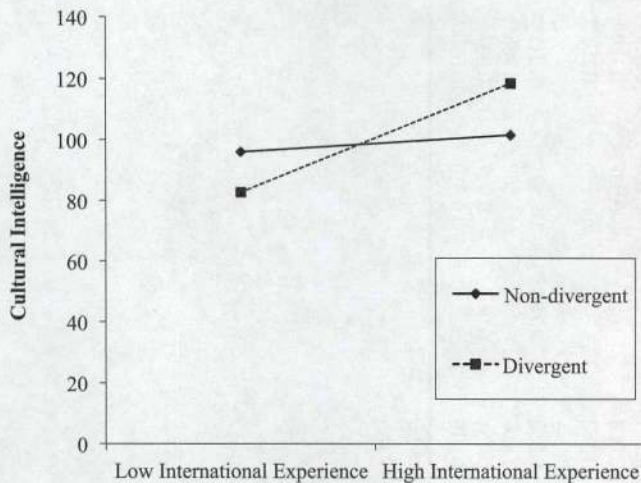
Our findings contribute to management learning literatures in two ways. First, our study enhanced understanding of experiential learning in the development of important capabilities for managing cultural differences, in our case, CQ of global executives. Previously, one study hypothesized the relationship between experiential learning and expatriate adaptation skills (Yamazaki & Kayes,

**TABLE 6**  
Moderated Multiple Regression Analysis of  
Accommodative Learning Style on CQ ( $N = 294$ )

Variable	CQ		
	Model 10	Model 11	Model 12
Gender	-0.151**	-0.161**	-0.158**
Age	0.043	-0.024	-0.025
Education	0.197***	0.195***	0.191***
Ethnicity	-0.039	-0.026	-0.024
Parents	0.085	0.083	0.082
International experience		0.182**	0.239**
Accommodative		0.093	0.094
International Experience × Accommodative			-0.085
<i>F</i>	5.549***	6.025***	5.444***
$\Delta F$		6.665***	1.323
$R^2$	0.089	0.130	0.134
$\Delta R^2$		0.041	0.004

Note. CQ = cultural intelligence.

Two-tailed tests. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



**FIGURE 3**  
Interaction Effect

2004), and another hypothesized that cultural intelligence enhances the likelihood that individuals actively engage in four experiential learning modes to develop global leadership competencies (Ng, Van Dyne, & Ang, 2009). Yet to date, no research has empirically tested these relationships. Our study delineated and tested the relationship between experiential learning and the development of cultural intelligence and advanced our understanding of how international experience and experiential learning play a unique and important role in the development of cultural intelligence.

Our results demonstrate that the length of overseas work experience is positively related to the level of CQ, and that a divergent learning style enhances this positive relationship even when more general individual backgrounds, such as age, gender, and educational background are controlled for. These findings imply that cultural intelligence does not develop overnight. The longer one is immersed in a different culture or cultures, the higher level of CQ one may develop. Such experience in a different culture is central to developing CQ. Even though it is likely that high CQ individuals self-initiate overseas work (Tharenou & Caulfield, 2010) and remain working overseas because they enjoy it and are confident they can deal with cultural challenges, ample evidence shows international experience enhances CQ (Ng, 2011), expatriate adjustment (Selmer, 2002), and global leadership (Caligiuri & Santo, 2001). A meta-analysis study about expatriate adjustment also suggests that it takes 5 years on average to feel integrated in a society (Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005). It may take similar time spans for executives to develop a satisfactory level of CQ.

More important, our results suggest the strength of the divergent learning style in developing CQ from overseas experience. Managers with this learning style can connect their feelings closely to their immediate overseas experience, they are sensitive about meaning and values (Kolb, 1984), and so they can acquire more cultural knowledge (cognitive CQ) from overseas experience. They view concrete cultural situations from many perspectives (Kolb & Kolb, 2005b), and focus on the reflection, the checking of assumptions, and the adjustment of mental maps when actual experiences are different from expectations, thus developing higher metacognitive CQ. Moreover, they have a broad interest in cultures and people, thus can develop high motivational CQ. Their engagement in feeling and observing different cultural behaviors also leads to a better understanding of appropriate behaviors in different cultural contexts (Phillion, 2002); this results in high behavioral CQ. Our results also support the proposition by Yamazaki and Kayes (2004) that CE skills that are related to interpersonal skills, and therefore, building human relationships may be of primary importance in cross-cultural learning.

In addition to the findings of the strength of the divergent learning style in the development of CQ from overseas experience, our results suggest assimilative, convergent, and accommodative learning styles do not have an apparent positive or negative influence in comparison with a divergent learning style. These findings imply that the seemingly apparent strength of the assimilative learning style in assimilating different observations into an integrated cultural knowledge from experience is not supported. In fact, the lack of interest in people associated with this learning style may lead to the failure of accessing one major source of cultural knowledge learning—people from different cultures. Furthermore, the accommodative learning style does not seem to have evident strength in acquiring cultural knowledge. This is not in line with Armstrong and Mahmud (2008)'s finding that an accommodative learning style is the most effective among the four learning styles in acquiring managerial tacit knowledge from managerial work experience. Further, its influence on behavioral CQ is confirmed, as we expected. This suggests that behavioral CQ is not about getting involved in new experiences by intuitive trial-and-error actions, opportunity seeking, and risk taking; rather, it is more focused on knowing appropriate behaviors through careful observation and reflection and practicing those behaviors (Johnson et al., 2006). In addition, the convergent learning style does not show strength in develop-

TABLE 7  
Moderated Multiple Regression Analysis (N = 294)

Variable	Metacognitive CQ				Cognitive CQ				Motivational CQ				Behavioral CQ			
	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26	Model 27	
Gender	-0.185**	-0.178**	-0.171**	-0.015	-0.008	-0.004	-0.162**	-0.152**	-0.147**	-0.193***	-0.191***	-0.184**				
Age	0.001	-0.034	-0.041	0.061	0.002	-0.001	0.077	-0.006	-0.011	-0.016	-0.049	-0.055				
Education	0.148**	0.142**	0.135**	0.267***	0.261***	0.257***	0.137**	0.128**	0.123**	0.053	0.051	0.044				
Ethnicity	-0.058	-0.054	-0.048	-0.030	-0.020	-0.017	-0.059	-0.046	-0.042	0.013	0.019	0.025				
Parents	0.029	0.024	0.019	0.098	0.098	0.095	0.090	0.089	0.085	0.045	0.046	0.042				
International experience		0.082	0.036		0.177**	0.150**		0.247***	0.213***		0.106	0.064				
Divergent		-0.091	-0.001		0.005	0.057		-0.003	0.063		0.037	0.120				
International Experience			0.220***			0.127*			0.162**			0.201**				
× Divergent																
F	4.256***	3.758***	4.859***	5.995***	5.632***	5.469***	4.823***	6.107***	6.253***	2.752**	2.421**	3.341***				
ΔF		2.407	11.582***		4.368**	3.924**		8.668***	6.456**		1.568	9.285**				
R <sup>2</sup>	0.069	0.085	0.121	0.095	0.122	0.134	0.078	0.131	0.151	0.046	0.057	0.087				
ΔR <sup>2</sup>		0.016	0.036		0.027	0.012		0.053	0.019		0.010	0.030				

Note. CQ = cultural intelligence.  
Two-tailed tests. \* p < .05. \*\* p < .01. \*\*\* p < .001.

ing CQ from international experience. This implies that focusing on thinking and testing actions, which are the opposite of feeling and reflecting, respectively, is not a learning strength in developing CQ. Typically, the lack of interest in dealing with social and interpersonal issues associated with this learning style, similar to the assimilative learning style, is its limitation in developing CQ.

Second, our study contributes to the further development of measurement of cultural intelligence. Cultural intelligence as a fairly new concept has been said to "fall . . . short of specifying the construct as more than a loosely aggregated set of facets conceptually similar to intercultural competency, global mindset or host of other similar terms, or as an extension of constructs such as social intelligence in a new domain" (Thomas et al., 2008: 124). Researchers continuously refine the definition and measurement of cultural intelligence, and metacognitive CQ (Ang & Van Dyne, 2008) or CQ metacognition (Thomas et al., 2008) is one important facet of CQ. It differentiates CQ from other cross-cultural competency measures that simply emphasize knowing what to do and being adaptable in adopting different behaviors based on such understanding. Metacognitive CQ is fundamentally a learning capability to acquire cultural knowledge. Ang et al. (2007) have defined metacognitive CQ as the process individuals control to acquire and understand knowledge; it includes planning, monitoring, and revising mental models of cultural norms. The characteristics of the divergent learning style, which focuses on employing feeling and sensitivity in immediate intercultural encounters, and on understanding the meanings of by careful observation and reflection, can add more dimensions in the future development of the conceptualization and measurement of metacognitive CQ. Thomas et al. (2008) have included the focus on reflection of domain knowledge and skills from cross-cultural encounters in their conceptualization of CQ metacognition. The feeling (CE) dimension, which is the ability to employ feeling, the intuitive understanding of present reality, a sensitivity to other people's emotions and values, and the ability to view concrete cultural situations from many perspectives, have not been involved in the conceptualization of CQ to date. Even though Thomas et al. (2008) have incorporated an attention to conscious cognitive experience and affective and personal-motivational states with regard to the cultural milieu in the *monitoring* process of CQ metacognition, attention and intuition are different perspectives. As there continues to be substantial debate regarding the extent to which metacognitive processes operate at a purely conscious level,

the openness, intuitiveness, and sensitivity captured by CE has become one even more important and interesting element to be considered for future CQ conceptualization.

Furthermore, our result that the accommodative learning style does not have apparent strength in acquiring cultural knowledge is different from the finding of Armstrong and Mahmud's (2008) finding that the accommodative learning style is the most effective among the four learning styles in acquiring managerial tacit knowledge from managerial work experience. This raises a question about cultural knowledge: Is it "declarative/explicit knowledge" or "tacit/implicit knowledge"? The past conceptualization and measure of CQ focuses on the declarative content of cultural knowledge, for example, economic and legal systems, values, and behaviors of other cultures. There is no doubt such explicit content knowledge of other cultures and also of one's own culture serves as an important mental map for reflection to generate new cultural knowledge (Ang et al., 2007; Thomas et al., 2008). However, culture knowledge is complex and dynamic. For example, a recent study reported that explicit knowledge of Chinese business culture as collectivism, long-term orientation, and risk aversion, which are pervasive in management and cultural training programs, are three myths (Meyer & Shen, 2010). In reality, what many expatriates experienced in China in recent years is the opposite—the rise of individualism, the real-time reaction of decision making, and risk tolerance. Such tacit knowledge is difficult to understand and describe when managers experience it, and it is of course difficult to transform into declarative knowledge. In addition, the changing nature of culture also suggests the tacit knowledge gained through real-time cross-cultural experience is extremely important for CQ. Therefore, future conceptualization and measurement of cognitive CQ should capture tacit cultural knowledge in addition to declarative cultural knowledge. Ultimately, we hope the advancement of understanding experiential learning on the development of CQ from our work here contributes to the future conceptualization and measurement of CQ and also other important capabilities of global leaders.

### Managerial Implications

If international experiences are the source of learning, then it is essential for global executives to gain them. However, gaining international experiences does not, in and of itself, guarantee one will learn from them. By uncovering the impact of different learning styles on cultural intelligence,

executives can self-evaluate their learning styles and understand their potential to develop cultural intelligence from possible international experience. Executives can employ the Kolb's Learning Style Inventory (KLSI3.1; Kolb & Kolb, 2005a) as a self-assessment exercise and tool to understand their preferred approach to learning and learning style. More important, executives can manage their learning modes (CE, RO, AC, and AE) during their international experience to develop cultural intelligence. As the divergent learning style is the most positive in developing CQ from international experience, those executives with a convergent learning style, for example, can pay more attention to keep in touch with their "feelings" and reflecting by watching and listening very carefully and developing interpersonal skills to better develop their CQ.

As Fernandez notes, "developing global executives is a strategic business priority. To accomplish this successfully, the right mix of selection, training, and experiential procedures is necessary" (Fernandez, 2003: 37). The results of this study have important value for international executive selection and may be used to guide international corporations to form policies and practices to develop potential global leaders. The results suggest international corporations endorse the consideration of learning style in assessment and development activities. The assessment of learning style points the way to developmental qualities rather than making decisions based on personality traits alone. Companies will want to give valuable international experiences to people most likely to learn from them. From our results here, executives with a divergent learning style have the greatest potential to develop cultural intelligence. Previous international experience is also an important factor to consider when companies are selecting and identifying their global high-potentials. Many companies typically need to send their technical experts to overseas operations to transfer knowledge, and quite a high percentage of technical professionals have a convergent learning style (Kolb, 1984). Therefore, it becomes critical for companies to understand executives' learning styles and design appropriate developmental opportunities to help them deal with cultural challenges.

Culture is perceived as too abstract, vague, and complex in classroom training (Blasco, 2009). The most effective way to train cultural intelligence is through concrete international experience, especially international experience of adequate length. Therefore, it is important that longer term overseas experiences are provided for global potentials. During these assignments, cross-cultural coaching

is an important development process to prevent derailment and unleash the potential of executives (Rosinski, 2003). The experiential learning cycle (feeling, reflecting, thinking, and acting) offers a framework and process that coaches can undertake to facilitate the learning from these experiences not by just doing it, but by being able to reflect and gain conceptual insight while doing it (Mintzberg & Gosling, 2002). To facilitate experiential learning, it is also important for corporations to create a supportive learning environment (Chen, Kirkman, Kim, Farh, & Tangirala, 2010) since feelings and emotions have primacy in determining whether and what people learn (Kolb & Kolb, 2005b). Positive feelings of interest and intuitive connection facilitate learning, and negative emotions such as fear and anxiety block learning. Therefore a supportive learning organizational culture is desirable in order to facilitate the development of CQ among leaders and staff in a corporation and develops global operation capability.

#### Limitations and Future Research

As the first empirical research testing the relationship between experiential learning theory and cultural intelligence, these results shed light on the potential paths of inquiry for future researchers. Our contributions also must be assessed in light of their limitations.

Based on the self-perception theories, people can often be active observers of their own behavior and can measure it more accurately than others (Bem, 1967; Shrauger & Osberg, 1981), thus, we adopted self-report surveys for our study. However, bias may exist due to social desirability, halo effects, and acquiescence (Bagozzi, Yi, & Phillips, 1991); therefore, future research should have independent evaluations, for example, evaluations from subjects' supervisors or colleagues. Such performance-based measures of CQ, especially of behavioral CQ are likely to more accurately reflect individual's CQ and be more useful in the prediction of cross-cultural adaptation (Ward, Fischer, Lam, & Hall, 2009) and other performance outcomes. As do Lee and Templer (2003), we recommend that future research adopt multiple approaches such as interviews, observation, computer simulations, critical incidents, cultural assimilators, and assessment centers to assess the different facets of CQ. This study highlights some important issues for the future conceptualization and measurement of CQ, focusing on the ability to employ feeling, intuitive understanding in the present reality, sensitivity to other people's emotions and values, and ability to view concrete cul-

tural situations from many perspectives. Some other elements of intercultural competencies such as a spirit of adventure, non-ethnocentric attitudes, and some communication competencies, such as displaying respect and clarity, are worthy of consideration as well.

We measured international experience by the time spent in overseas work experiences. International experience, by its very nature, is a multidimensional concept that includes both work and nonwork experience (Takeuchi, Tesluk, Yun, & Lepak, 2005). Nonwork experience, such as previous bicultural life experience (Bell & Harrison, 1996), is another important source of learning in developing CQ. Moreover, not all experiences are equal; both the quantity and quality of experience are important considerations. Challenging experiences force people to learn new things; bland experiences do not (McCall & Hollenbeck, 2002). It is likely that international experience in cultures that are dissimilar from one's own can be more challenging and offer greater opportunity to learn. However, learning in these settings can involve a lengthy time period and require certain personal attributes such as a divergent learning style, self-compassion to learn from experience (Shepherd & Cardon, 2009), and a coping orientation (Shepherd, Patzelt, & Wolfe, 2011), among others. Therefore, cultural similarity is possibly a double-edged sword in CQ development, similar to the paradoxical research findings about cultural distance (Shenkar, 2001) and cultural difference (Van De Vijver & Leung, 2000). It is intuitively appealing to hypothesize that there is an inverted U-shaped relationship between cultural similarity and CQ development in that global executives can learn the most when there is a moderate level of cultural similarity. In this study, we did not test this hypothesis because our focus was on length of overseas work experience. Similar to other studies that found the length of one's time on the job to be the most important factor for job learning (e.g., Morrison & Brantner, 1992), we considered the length of overseas work experience the most important factor to develop CQ. Also, the length of overseas work experience in our study was not limited to a single overseas assignment; in many cases, multiple overseas assignments were included. Nonetheless, we strongly encourage that future research look into the impact of cultural similarity (novelty, distance or difference) on CQ.

In addition, this study does not answer the question of how other environmental factors influence the development of CQ, factors such as the social support provided by the organization and the host country (Chen et al., 2010; Lee, 2007), the cultural

context (Bhaskar-Shrinivas et al., 2005), and the racial or ethnic composition of one's neighborhood, workplace, or school environment (Bell & Harrison, 1996). These contextual factors need to be examined in future studies to provide additional insights into the relevance of international experience to CQ.

In this study, other than the moderation effect of experiential learning styles, we did not study the relationship between experiential learning modes and CQ. A longitudinal study to examine this relationship is needed. In addition, learning style and learning flexibility can combine to produce unique patterns of adaptation to different learning contexts (Sharma & Kolb, 2010). Learning flexibility is likely to have an important impact on the development of CQ; therefore, another avenue of study would be to test the influence of learning flexibility on the development of CQ through the administration of the Learning Flexibility Index (LFI; Sharma & Kolb, 2010) and CQ questionnaire.

## CONCLUSIONS

This study contributes to the management learning literature by employing experiential learning theory to explain the learning process in the development of CQ from international experience. It delineates the extent to which the length of overseas experience contributing to the development of CQ varies depending on the executives' learning styles. As the first empirical study testing the relationship between experiential learning theory and CQ, the hypothesis that experiential learning style moderates the positive relationship between length of overseas work experience and CQ was confirmed. Specifically, this positive relationship is strengthened when global executives have a divergent learning style, not when they have an assimilative, convergent, or accommodative learning style. As a result, this study offers valuable insight into the selection and development of global leaders.

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**Ming Li** is a faculty member of the ESC Rennes School of Business in France. She received a PhD in management from University College Dublin. Li's current research interests include global leadership and applications of research methodology.

**William H. Mobley** is Visiting Chair Professor of Management at the University of Macau. He earned his PhD in psychology at the University of Maryland. Mobley's research interests include leadership across boundaries, organizational culture and effectiveness, and executive assessment and coaching.

**Aidan Kelly** is professor of management in the Smurfit Graduate School of Business at University College Dublin, Ireland, and earned his PhD at the National University of Ireland. His current research interests include environmental policy innovation, cross-cultural conflict management strategies, leadership and cultural intelligence, emotion effects in groups, re-entry experiences for Chinese expatriates returning home, and the nature of entrepreneurial developments in China.