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# *The Influence of Cultural Intelligence on Cross-cultural Adjustment for International Students in University: The Mediating Effect of Self-efficacy*

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# Introduction

- Overseas adjustment of expatriates has been an important research issues since 1990's (c.f. Takeuchi, 2010), however, same issues of international students who enroll in exchange programs seems not capture scholars' much attention (Chao, Takeuchi, & Farh, 2017; Morris, Savani, Mor, & Cho, 2014).
- Although many researches revealed the influences of contextual factors on expatriates' CCA (e.g. Malek, Budhwar, & Reiche, 2015; Zhuang, Wu, & Wen, 2013), the power of individual factors, should not be ignored. Based on the result of a meta-analysis by Hechanova, Beehr, & Christiansen (2003), among four common predictors, namely individual, work-related, environmental and family-related factors, of adjustment, self-efficacy (SE) was the only one which correlated to all three facets of CCA (general, interactional, and work adjustment).

# Literature Review 1

- CQ is defined by Earley and Ang (2003) as an individual's capability for successful adaptation to new and unfamiliar cultural settings and ability to function easily and effectively in situations characterized by cultural diversity.
- CQ consists of four dimensions: metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ.
- Ang, Van Dyne, Koh, & Ng's (2004); Earley & Peterseon (2004); Ang et al. (2004) ; Earley, Ang and Tan (2006); Templer et al. (2006) ; Chen, Lin, & Hsu(2011)

**H<sub>1</sub>: Cultural Intelligence (CQ) will be positively related to the cross-cultural adjustment (CCA).**

# Literature Review 2

- Self-efficacy is defined as “the conviction that one can successfully execute the behavior required to produce the outcome” which has its roots in Social Learning Theory (Bandura, 1977).
- Scholars in the cross-cultural adjustment area define self-efficacy as confidence in dealing with the full foreign surroundings (e.g., Black, Mendenhall, & Oddou, 1991; Wang, 2005), since SE gives an individual the confidence to deal with uncertainty and a stressful environment.
- Gong & Fan (2006); Earley & Ang (2003)

**H2: Self-efficacy (SE) will be positively related to the cross-cultural adjustment (CCA).**

# Literature Review 3

- Both CQ and SE are not stable abilities.
- Individual's CQ may be relatively stable in the short term, but it can be learned and developed in the long term (Earley & Ang, 2003). All dimensions of CQ are considered as trainable by tailoring training (Tan & Chua, 2003; MacNab & Worthley, 2012; Earley & Peterson, 2004).
- Bandura believes that SE is the result of interaction with external environment, personal ability and performance. Cross-cultural training influences the development of self-efficacy (Bandura, 1997; Osman-Gani & Rockstuhl, 2009; Rehg et al., 2012).

**H3: Cultural Intelligence (CQ) will be positively related to the Self-efficacy (SE).**

**H4: Self-efficacy (SE) will mediate the relationship between CQ and CCA**

# Methodology-Sample

- Sample size: 173
- Paper questionnaires
- Deliver in person
- International exchange students of Providence University
- Participants were primarily (86%) from Asia (e.g. China, Indonesia, Japan, South Korea, Philippines, Taiwan, Thailand, Vietnam) with small numbers from Europe and America (14.5%). The biggest age group was between 21 and 26 (72.3%), the age group under 20 was 20.2%, the age group 27-36 was 6.4%, the age group 37-45 was 1.2%. There were 69.9% of them had prior abroad travel experience, and 54.9% of them had experience for living abroad.

# Methodology-Instruments

- Cultural Intelligence
  - Ang, Dyne, Koh, & Ng (2004)
  - 20 items
  - 7 points Likert scale
  - Cronbach's  $\alpha=.97$
- Cross-cultural adjustment
  - Black and Stephens (1989)
  - 9 items
  - 7 points Likert scale
  - Cronbach's  $\alpha=.90$
- Self-efficacy
  - Sherer & Adams (1983)
  - 11 items
  - 5 points Likert scale
  - Cronbach's  $\alpha=.94$

# Results

Table 1 Means, Standard Deviations, and Correlations among Variables (n=173)

Variables	Mean	SD	1	2	3	4	5	6
1. CQ	5.08	0.71	1					
2. Metacognitive CQ	5.50	0.83	0.73**	1				
3. Cognitive CQ	4.33	0.95	0.72**	0.31**	1			
4. Emotional CQ	5.55	0.95	0.77**	0.52**	0.33**	1		
5. Behavior CQ	5.21	1.05	0.77**	0.48**	0.36**	0.50**	1	
6. Self-efficacy	3.58	0.43	0.31**	0.26**	0.17*	0.29**	0.25**	1
7. CCA	5.50	0.88	0.63**	0.53**	0.29**	0.62**	0.50**	0.42**

Note: \*p<0.05, \*\*p<0.01; CQ=Cultural Intelligence; CCA=Cross-cultural Adjustment

# Results

Table 2 Results of mediated regression analysis for CQ and cross-cultural adjustment (n=173)

	Self-efficacy		Cross-cultural adjustment		
	M1	M2	M3	M4	M5
	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
Controls					
· Gender	0.076	0.082	-0.030	0.014	-0.006
· Age 1 (under 20)	0.254	0.286	-0.237	-0.067	-0.136
· Age 2 (21-26)	0.087	0.309	-0.288	-0.122	-0.197
· Age 3 (27-35)	0.155	0.183	-0.191	-0.070	-0.113
· National	-0.054	-0.035	-0.022	-0.006	0.003
· Abroad experience	-0.025	-0.030	-0.014	-0.035	-0.028
· Living abroad	0.025	0.060	0.080	0.160	0.146
Predictor					
· CQ		0.322***		0.641***	0.564***
Mediator					
· Self-efficacy			0.420***		0.240***
R <sup>2</sup>	0.012	0.113	0.186	0.415	0.466
$\Delta$ R <sup>2</sup>	-0.030	0.070	0.146	0.386	0.436
F	0.277	2.625**	4.689***	14.531***	15.791***

Notes: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001; CQ=cultural intelligence

# Discussion & Conclusion

- CQ significantly influence the level of cross-cultural adjustment, moreover, the higher the CQ individuals have, the better cross-cultural adjustment they perform.
- The result confirmed the findings of Searle & Ward (1990) and Sung (2009) indicating that cross-cultural adjustment may be influenced by cultural intelligence when the individual is exposed to intercultural interaction.

# Discussion & Conclusion

- Individuals accumulate knowledge through past experience to improve their cognition and increase the level of their self-confidence on their actions. According to previous studies, cultural intelligence is a kind of ability that can be improved. When the individual's cultural intelligence increased and the follow up positive experience may enhance their confidence, so that their self-efficacy will also be increased.
- This result echoed research results of Bandura (1996), Ang et al. (2009), Lin (2009), and Yu, Chao, & Chen (2010) that CQ and SE play important roles on cross-cultural learning.

# Limitations & Suggestions

- First, a cross-sectional study design restricts the ability to prove a cause-effect relationship. Future research should considering longitudinal study since CQ is a dynamic competency that is malleable capability and therefore its effect on SE and CCA may varies over time. A longitudinal study would provide better knowledge on these changes that took place over the time.
- Second, we acknowledge that some concerns might exist in that self-reported measures (i.e., CQ, SE, and CCA) have social desirability and common method bias problem. Therefore, future research should include assessment from multiple sources including peers, professors, or university staffs.
- Finally, since this study assesses international exchange students' CQ, SE, and CCA, conducting a qualitative study using interview or observation may provide broader understanding of how CQ affects these outcomes.



Thank You!