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#### Abstract

In response to increasing demand for intercultural competency in global work environments, universities in the United States have expanded opportunities for study and internship abroad. However, there is comparatively little research on the program design for internship abroad programs and how it affects intercultural competency. This study presents a new curriculum model for the internship abroad called Live-Learn-Work (LLW) and evaluates its effects on the cultural intelligence (CQ) of undergraduate student participants in three different settings: Seoul, South Korea; Amsterdam, Netherlands; and Lima, Peru. The design of LLW is unique in that it integrates a theoretical framework from Experiential Learning Theory (ELT) with a measure of cultural competency, the cultural intelligence scale (CQS), and provides a holistic approach to the internship abroad. Utilizing a pre- and post-test design, this study analyzed the effect of each program on the four subscales of CQ (cognitive, metacognitive, motivational, and behavioral), and discussed their interrelations. The study concluded that the program design had a statistically significant positive effect on cultural intelligence, but that this effect was uneven across CQ subscales and programs. These results point to the need for further research on the relationships among CQ dimensions.

#### Keywords

experiential learning theory, intercultural competency, study abroad program design, CQ dimensions

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### Live-Learn-Work: Experiential Learning and Cultural Intelligence in the Internship Abroad

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#### Abstract

In response to increasing demand for intercultural competency in global work environments, universities in the United States have expanded opportunities for study and internship abroad. However, there is comparatively little research on the program design for internship abroad programs and how it affects intercultural competency. This study presents a new curriculum model for the internship abroad called Live-Learn-Work (LLW) and evaluates its effects on the cultural intelligence (CQ) of undergraduate student participants in three different settings: Seoul, South Korea; Amsterdam, Netherlands; and Lima, Peru. The design of LLW is unique in that it integrates a theoretical framework from Experiential Learning Theory (ELT) with a measure of cultural competency, the cultural intelligence scale (CQS), and provides a holistic approach to the internship abroad. Utilizing a pre- and post-test design, this study analyzed the effect of each program on the four subscales of CQ (cognitive, metacognitive, motivational, and behavioral), and discussed their interrelations. The study concluded that the program design had a statistically significant positive effect on cultural intelligence, but that this effect was uneven across CQ subscales and programs. These results point to the need for further research on the relationships among CQ dimensions.

**Keywords:** experiential learning theory, intercultural competency, study abroad program design, CQ dimensions

#### Introduction

The rise of globalization and the continuing need for businesses, governments, and educational institutions to be internationally competitive has created increased demand for (inter)cultural competency. In the late 1980s and early 1990s, companies began to prioritize international experience as a recruitment focus. Stroh and Caliguiri (1998) reported that companies named intercultural competencies in the top five training and development needs of their employees. However, businesses still find it challenging to find employees who can work in a diverse, global environment (Ang & Inkpen 2008). Failing to hire these employees puts companies at a

competitive disadvantage. As a result, businesses and employers are requesting more professional international experiences.

Universities have responded to employer demands by creating study abroad programs and other initiatives to *internationalize* their campuses. With these efforts, boosted by organizations like UNESCO and the Institute of International Education, study abroad opportunities at the college/university level have seen steady growth in the past 30-40 years. While about 71,000 students from U.S. universities studied abroad each year in the 1990s, there were 341,751 college students who studied abroad in the 2017-2018 academic year, according to NAFSA (n.d.). However, most of the study abroad programs at the university level remain academic in nature and focus on content-specific programming, with less than 3% including an internship or service component (Institute of International Education, n.d.). In the 2017-2018 academic year, the number of students involved in a non-credit experiential activity was 36,975, a small fraction in comparison to the number participating in purely academic programs (NAFSA, n.d.).

With the overall increase in study abroad participation, it is tempting to assume corresponding increases in cultural awareness, competencies, and intelligence. However, traveling abroad does not necessarily lead to the development of culturally intelligent individuals (Lambert Snodgrass, 2017; Lambert Snodgrass et al., 2021; Vande Berg et al., 2012). While travel and study abroad experiences have been shown to increase an awareness of cultural differences (Paige et al., 2009; Williams, 2005), and may provide a theoretical understanding of culture on some level, there is no guarantee that they increase participants' abilities to act in culturally appropriate ways in an international workplace.

To develop more culturally competent participants, study abroad curriculum designers, educators, and program leaders need to divest from the assumptions that experience abroad is intrinsically enriching and that imparting theoretical cultural knowledge is enough to prepare students for the workplace. Rather, they should design programs with clear attention to developing cultural competence in its multiple facets, particularly in those programs that embed students directly in intercultural work experiences, like internships abroad. ELT offers a theoretical framework for understanding how concrete experience informs learning. Integrated with CQ, a concept of intercultural competence that identifies four elements—cognitive, metacognitive, motivational, and behavioral—of intercultural intelligence, we can capture both thinking and engaging in an intercultural experience.

This study presents a model for an international internship study abroad program called Live-Learn-Work. The model was implemented in three countries—South Korea, the Netherlands, and Peru—and the program's curriculum was developed with both ELT and CQ in mind. The present study seeks to fill a gap in intercultural research through its innovative integration of ELT and CQ in the internship abroad program, making a clear contribution to the study and design of internship abroad programs. In addition, the examination of the four factors within CQ not only generates insights into how different elements of CQ depend on and relate to each other but also the ways intentionality in curricular design can increase gains in intercultural competence.

#### **Theoretical Framework: ELT**

ELT, developed by Kolb (1984) in the tradition of predecessors Dewey, Lewin, and Piaget,

provides a framework for understanding how learning may or may not occur through experience. Kolb maintained that knowledge was created through experience, but that experience itself was not enough; rather, reflection on experience and development of abstract understanding were important to allow people to fully grasp knowledge and apply it in real life. As mentioned above, study abroad scholars like Vande Berg et al. (2012) would likely agree with this assertion; the experience of study abroad does not by itself produce students who are more interculturally aware or competent.

However, Kolb's model has received criticism from numerous scholars (Bergsteiner et al., 2010; Seaman, 2008; Quay, 2003) particularly in its conception of learning as a *cycle* with four stages moving from concrete experience to reflective observation to abstract conceptualization and to active experimentation. Chief among these concerns is that learning rarely follows neatly from one stage to another, and that people do not necessarily learn *from* experience after the fact, but rather *in* experience itself (Cole et al., 1997; Seaman, 2008). Moreover, the bias toward cognitive processes like individual *reflection* in Kolb's work may neglect embodied knowledge or other ways of knowing, and thereby inherently privilege a Western rationalist epistemology over other perspectives (Cole et al., 1997; Seaman, 2008).

Given these valid critiques, it is necessary to abandon the idea of an ELT *cycle*. Nevertheless, the current study uses ELT as a theoretical framework, with some important revisions. Rather than conceive of experiential learning as a cycle, we understand it as a collection of processes that facilitate learning. These processes may occur in any order or simultaneously. At the same time, it is important to acknowledge experiential learning as an iterative process. Experiences are frequently repeated and behavioral patterns developed over time in multiple encounters with difference. Learning allows new patterns and connections to be formed so that people can meet the same situation in a new way. In that sense, there is an important temporal element that should be retained even as we revise Kolb's work.

#### **Conceptual Framework: CQ Model**

While Kolb's work comes from a particular tradition in education focused on experience, CQ was developed within the field of intercultural studies to measure and assess cultural competence, particularly in the workplace. CQ, as defined by Earley and Ang (2003), is a concept of intelligence that refers to an individual's ability to adapt to and function within new cultural situations. It is measured through the CQS. Ang and Van Dyne (2008) noted that one of the major distinctions of CQ is that it is multidimensional, incorporating cognitive, metacognitive, motivational, and behavioral intelligence dimensions. In contrast, the most widely known intelligence, IQ, involves cognitive and metacognitive functioning, but does not include motivation or behavioral functioning. Emotional intelligence employs elements of motivational and behavioral dimensions of intelligence, but not cognitive or metacognitive. Therefore, Ang and Van Dyne (2008) asserted that CQ is complemented by IQ and Emotional intelligence; however, it moves beyond mental and social intelligences into the realm of cultural adaptation.

Earley and Ang (2003) credited the multidimensionality of CQ to the influence of Sternberg and Detterman's model of multiple foci of intelligence in which the research and theories on intelligence were consolidated into a working framework that included cognition, metacognition, motivation, and behavior. Therefore, CQ as a multifactor concept is significantly connected to

Sternberg's model in the distinction that "intelligence has different loci within the person" (Ang & Van Dyne, 2008, p. 4). This distinction is critical to CQ as it echoes the assertion that cultural intelligence functions in all four dimensions: Cognitive CQ, Metacognitive CQ, Motivational CQ, and Behavioral CQ.

Cognitive CQ, defined as the basic knowledge of cultural norms, processes, practices, and beliefs that one develops through experiences and education, enables individuals to understand and process information regarding cultural norms and ways in which people within a culture function for the betterment of that culture (Ang & Van Dyne, 2008). Government, economics, education, laws, language, and religion are a few examples of cultural norms that cognitive CQ enables an individual to understand (Earley & Ang, 2003). Van Dyne et al. (2008) claimed that cognitive CQ is the most widely used factor when preparing and training employees for international assignments and working on intercultural competencies. The neglect of the other factors of CQ in preparation and training sessions, however, may subject employees to a disadvantage in dealing with real situations in the new culture (Van Dyne et al., 2010).

The second dimension, metacognitive CQ, allows people to move beyond basic cognition or knowledge to manipulation of knowledge, allowing them to create strategies for the interpretation of new information. This process requires the individual to be present in noting the differences in cultural norms, beliefs, and processes and to plan an adaptive strategy to cope with these differences; when new information is gained, the strategy is reviewed and revised as necessary (Earley & Ang, 2003). As Van Dyne et al. (2008) claimed, "metacognitive CQ emphasizes strategy and is the lynchpin between understanding cultural issues and actually being able to use that understanding to be more effective" (p. 137).

To be able to put strategies into action, however, individuals must possess motivation. Motivational CQ is defined as an individual's capacity to focus energy and attention to learning about and functioning in a new culture (Earley & Ang, 2003). Van Dyne et al. (2008) referred to motivational CQ as the intrinsic drive to act or engage in cultural experiences. Individuals who demonstrate motivational CQ are self-motivated to employ their knowledge and strategy in actual cultural situations. Accordingly, individuals who have gained cognitive CQ and have actively moved through the strategic planning of metacognitive CQ are likely to be motivated to drive their thoughts and beliefs into actionable behavior (Ang & Van Dyne, 2008).

The final factor, behavioral CQ, is known as the action dimension. Individuals demonstrating behavioral CQ are effective at interacting in a variety of cultural situations (Earley & Ang, 2003). Behavioral CQ is derived from the three other factors to enable individuals to develop a wide range of engagement strategies appropriate to a variety of new situations. As noted by Van Dyne et al. (2008), individuals utilizing behavioral CQ know when "flexible actions tailored to a specific cultural context" (p. 137) are appropriate and when they are not. While the factors do not flow linearly or in any particular order, each factor does build upon the next to enable effective and appropriate cultural interactions (Van Dyne et al., 2008).

#### LLW: Integrating ELT and CQ in one Model

Although ELT and CQ come from different fields, they connect to each other in remarkable ways. Both identify four important elements and presume that their linkage is necessary to produce learning and development. We posit that engaging in the four processes of ELT in an intercultural context allows people to develop the four factors of CQ. Mapping these processes and factors on top of each other reveals a somewhat binary structure that roughly corresponds to *thinking* and *doing*; cognitive and metacognitive CQ are strengthened through the activities of reflective observation and abstract conceptualization, while behavioral and motivational CQ connect clearly to concrete experience and active experimentation. The relationship between them is mutually reinforcing; the CQ factors enable the ELT processes, while engaging in the ELT processes strengthens the CQ factors, eventually allowing these factors to be measured quantitatively as subscales on the CQS.

In this study, the conceptualization of these two frameworks allowed for the development of the curriculum model for the internship abroad we call LLW. Program participants lived and worked in the host countries, while also attending classes that spurred their learning. These three spheres provided multiple arenas in which participants could develop CQ and engage in ELT processes. Importantly, this model does not conceive intercultural development as a linear or cyclical process, but rather a dynamic, multidimensional system in which the experiences of living, learning, and working act as the gears that drive growth.

Figure 1. Visual Representation of LLW Model



#### Methods

This study examined the effects of the design and implementation of an international internship program experience on the participants' CQ. The research incorporated experiential interactions of interning abroad and cultural engagement during a summer program in Seoul, South Korea; Amsterdam, Netherlands; and Lima, Peru. The study employed a survey approach incorporating a pre-test and post-test using the (CQS). The guiding research question was: *Are there significant differences in CQ among the participants of the South Korea, Netherlands, and Peru programs with respect to the pre- and post-program subscale scores as measured by the CQS?* 

#### Program Design

With the integrated model of CQS and ELT serving as a theoretical foundation, each of the programs incorporated elements of the LLW curriculum model in the program design (Lambert Snodgrass, 2015). The three elements of the LLW model worked synergistically, offering participants a holistic experience that sought to develop their cultural competency. According to

the model, *living* is described as residing in a place that one feels a part of, at home in; to be an active member of a community by engaging in its customs, appreciating its values, participating willingly in its processes; to build relationships with people, businesses and organizations that nourish the self and others (Lambert Snodgrass, 2015). As demonstrated in Figure 2, the Netherlands, Peru, and South Korea faculty leaders selected apartments in residential neighborhoods in which the participants lived in during their respective programs. Participants of each program engaged in daily life as the locals did by using public and private transportation, visiting neighborhood businesses such as groceries, and developing relationships with local community members by participating in neighborhood activities (soccer at the local square in Lima; karaoke in Seoul; bike clubs in Amsterdam). Embedded within the living element were the other two elements of *learning* (attending classes) and *working* (completing the internship).

Country	Livo	Loarn	Work
Amsterdam, Netherlands	Apartments in the Noord district; public transportation via bike, bus, metro, tram, & ferries; adjacent to local eateries, pharmacy, grocery, etc.	1 course: International Business Issues with weekly reflective journal, weekly group debriefs, cultural excursions and interactions with local community	120 – 180 hours of internship experience with entrepreneurial companies
Lima, Peru	Apartments in the Miraflores neighborhood; public transportation via bus, taxi (micros), and train; short walk to grocery, laundry, and pharmacy.	2 courses: Latin American Culture and Spanish Language: 101 - 402 with weekly reflective journal, weekly group debriefs, cultural excursions	120 – 160 hours of internship experience with a variety of local and international/multi- national companies
Seoul, South Korea	Apartments in/near Hongdae; transportation via public bus and subway or taxi; walk or bus to a variety of food, pharmacy, and other amenities.	2 courses: South Korean Popular Culture and Glocal: Society, Food, and Culture with weekly reflective journal, weekly group debriefs, cultural excursions and interactions with local community	80 -120 hours of internship experience with multi-national companies

Figure	2	Curric	mulum	Man	ofI	I W	Mod	lel
rigure	4.	Curric	Juluill	wap	01 L		MIOC	lei

*Learning*, the second element of the LLW, is defined in the model as engaging in formal academic coursework as part of an organized international experience through an institution of higher education (Lambert Snodgrass, 2015). While course content varied from program to program, each program included respective cultural content and the experiential methods employed via instructional practices were consistent. Participants completed content specific readings and writing assignments, wrote reflective journal entries, engaged in group oral debriefs, and participated in a community engagement or community service assignment. Learning activities, directly connected to cultural issues present in both living and working situations, allowed students to deepen their cultural knowledge and reflect on their experience from within the experience itself, thereby encouraging the students to develop and adopt new strategies. In this way, the learning element not only served as the cognitive foundation for the experience, but also encouraged growth in metacognition and other factors of participants' cultural competency.

The third element of the model is *work*. For these programs, work referred to the internship experience and was described as participation in a work experience in which participants gained marketable skills respective to their career paths and cultural competency. As noted in Figure 2 participants in each of the three programs completed between 80-180 hours of internship experience. Employer type varied according to location, ranging from small entrepreneurial

companies to multi-national companies. At the beginning of the program, leaders worked with each individual participant and respective employer to set goals for the internship, specifically academic, cultural, and career goals. Goals were revisited periodically throughout the program and at the end. Unlike many internship programs that focus solely on the work experience and assume learning and living will occur organically, the integrated LLW model embedded this work within a more holistic and intentionally-designed experience.

All three programs were planned with similar curricula but had different durations and were facilitated by different people with varying levels of experience. The Seoul, South Korea program, was a four-week intervention, implemented by a faculty member with wide-ranging experiential learning and study abroad experience, who conducted two weeks of pre-departure courses at the home university and included two content culture-specific courses. The Amsterdam, Netherlands program was a seven-week in-host country internship led by a faculty member with expertise in Dutch culture and in implementation of experiential learning practices. The Lima, Peru program was an eight-week program that combined pre-departure content-specific curricula with an in-host country practicum and coursework. Graduate students, with little experience in experiential education, ran the program in country while supervised by an experienced faculty member (Lambert Snodgrass et al., 2021).

#### Sample and Data Collection

As described in Lambert Snodgrass et al. (2021), the sample comprised participants enrolled in internship abroad programs in Seoul, South Korea (n = 13); Amsterdam, Netherlands (n = 12); and Lima, Peru (n = 6). These three programs shared common elements of an experiential internship and content-specific curricula. The total sample for the three programs was 31. Of the 31 participants, 13 (42%) were female and 18 (58%) were male while 58% were U.S. citizens and 42% held citizenship in a country other than the U.S. When asked about previous travel abroad experiences, of the 31 participants, 67.7% had some form of previous experience traveling beyond their home country, while for 32.3% of students, this was their first experience outside the U.S. The participants represented six schools or colleges within the institution. With IRB approval, data collection was managed via email and online methods. The CQS self-assessment was posted on an electronic online system using Qualtrics. Participants completed the CQS pre-test two weeks prior to their respective program's departure. One week after completion of the program, program participants completed the CQS post-test.

#### Data Analysis

Data analysis of the CQS self-assessment survey was done with IBM SPSS Statistics 23 software to provide descriptive and correlational statistics, including percentages, means, and standard deviations. We examined the means and interval data for normality and equality of variance. Using QQ Plots and histograms, the data were found to be normally distributed, as the deviations from the straight line in QQ plots were minimal and the histogram were bell-shaped and symmetric. Conducting Kolmogorov-Smirnov test and the Levene's test with all variables we also examined the normality and equality of variances. For Kolmogorov-Smirnov test (Massey, 1951; Lilliefors, 1967) and Levene's test (Levene, 1960), our *p*-values were greater than .05, providing evidence that our observed scores are not deviated from a normal distribution, and that population variances are equal. The assumptions for use of inferential statistics were deemed satisfied.

Different types of statistical significance tests, a paired *t*-test and ANCOVA, were performed on the CQS pre-test and post-test data for each program group. Descriptive statistics reporting the means, standard deviations, and standard error of the independent variables of gender, residency status, and previous travel abroad experiences were used and examined. Before applying univariate analyses, we explored for differences among different levels of the group characteristics to see if there were any significant differences in terms of our participants' pre-test scores. Finally, we applied a series of one-way ANCOVA on the post-test scores, with pre-test scores as co-variate. As Dugard and Todman (1995) mentioned in their analysis of pre-test-post-test designs in educational research, including pre-test scores as co-variate usually provides a more appropriate and informative analysis.

#### Results

This research sought to examine the effect of an internship abroad intervention on the four factors of cultural intelligence: motivational, behavioral, cognitive, and metacognitive CQ. The motivational CQ subscale consisted of 5 items ( $\alpha = .79$ ), the behavioral CQ subscale was comprised of 5 items ( $\alpha = .85$ ), the cognitive CQ subscale consisted of 6 items ( $\alpha = .84$ ), and the metacognitive CQ subscale involved 4 items ( $\alpha = .83$ ). Cronbach's alpha for the whole scale is .924. Internal consistency reliability estimates of the responses to CQS and its subscales measured with Cronbach's alphas indicated that this scale was a reliable instrument in this study, within its context, and with this sample of population. The range of Cronbach's alpha coefficients for these four subscales (ranging from .79 to .85) suggested a high level of adequacy and appropriateness of the degree to which the subscale's items measured the same single unidimensional latent construct (Earley & Ang, 2003). However, due to the sample size and subject to item ratio, more advanced item and factor analyses were not possible.

Applying a series of ANOVA, there were no statistically significant differences among the different programs/countries, gender, previous-travel-abroad-experience groups, and residency-status groups in terms of individual's pre-test scores. A paired-sample *t*-test analyses of all participants (n = 31) revealed statistically significant differences between individual's pre-test and post-test scores on the CQS survey. To avoid type II errors with extremely conservative Bonferroni correction in comparing between pre- and post-test items (Dunn, 1961; Schmidt & Hunter, 2014; Westfall & Young, 1993), we continued our analysis in terms of the four factors in this scale, comparing the motivational, behavioral, cognitive, and metacognitive CQs. Applying an adjusted *p*-value < .0125 ( $\alpha$ /4 for initial .05 level) for multiple significance paired-sample *t*-test, there were statistically significant differences between pre-test and post-test scores regarding two subscales of CQ, namely motivational and cognitive CQ (Table 1).

These results provided evidence that, in the participants' responses, comparing pre-test and posttest among four factors, there were statistically significant differences for motivational CQ (t(31)= -4.14, p < .001, d = 0.75) and cognitive CQ (t(31) = -4.45, p < .001, d = 0.74) before and after the internship abroad intervention. There was no interpretational problem with these two situations, in that the consistency between p-value (p < .001) and the effect size (d > .6) were achieved (Sun et al., 2010).

To have a more precise picture of these differences, we separately applied paired-sample *t*-tests analysis for each of the three different programs (South Korea, Netherlands, Peru), using a robust

and adjusted *p*-value of .0125 regarding the four subscales. The examination of the paired *t*-test findings of the four subscales of the South Korea program revealed that there were statistically significant differences between pre-test (M = 4.86, SD = 0.90, SE = 0.25) and post-test (M = 5.57, SD = 0.65, SE = 0.18) for the cognitive CQ subscale (t(13) = -3.56, p = .004, d = 0.92), but no significant differences were found for the other CQ subscales. For the second program, in the Netherlands, the investigation of the paired-sample *t*-test of the four subscales revealed that there were statistically significant differences between pre-test (M = 5.72, SD = 0.45, SE = 0.13) and post-test (M = 6.38, SD = 0.51, SE = 0.15) for the motivational CQ subscale (t(12) = -5.087, p < .001, d = 1.37). For the cognitive CQ (t(12) = -2.74, p = .019, d = 0.74) and metacognitive CQ subscales (t(12) = -2.78, p = .018, d = 0.67), there were effects of marginal significance regarding our adjusted *p*-value of .0125. However, there was no statistically significant effect for behavioral CQ. Finally, the third program in the study is the Lima, Peru program. Like the overall program findings, the subscale findings in reference to the research question indicated no significant differences in all four subscale areas. This non-significant finding may be linked to the small sample size (n = 6).

Examining the effects of different participant qualities yielded mixed results. Applying a series of one-way ANCOVA on the post-test scores with pre-test scores as co-variate, there were no statistically significant differences in terms of gender and previous-travel-abroad-experience groups. However, as shown in Table 2, there was a statistically significant difference in motivational CQ between the US (M = 6.44, SD = 0.11) and international (M = 5.91, SD = 0.13) participants in terms of individuals' post-test scores, F(1,28) = .109, p = .007, partial  $\eta^2 = .232$ .

#### Discussion

The aim of this study was to understand the effects of the experiential curricular interventions on the CQ of program participants. On the cognitive CQ subscale, the South Korea (p-value = .004) and Netherlands (p-value = .019) program participants had statistically significant gains. This gain in cognitive CQ is perhaps not surprising, given that the cognitive CQ dimension is often where educators and program designers focus their attention as knowledge and outcomes are easily measured (Lin et al., 2012). From this result, we can surmise that the South Korea and Netherlands participants grew in their knowledge of basic daily living strategies such as awareness of legal and economic systems, cultural values and religious traditions, and language structures. This growth may have been related to the pre-departure meetings and curricula content that focused on cognitive knowledge to acquaint participants with the new culture.

For the metacognitive CQ subscale, the Netherlands program participants showed significant gains from the pre-test to post-test (p-value = .018). While all programs did show growth, the South Korea and Peru programs did not yield a significant difference in this dimension. There are a couple possible interpretations of this result. First, it is possible that the program facilitators in the Netherlands were better able to activate the metacognitive dimension through their pedagogical methods and implementation of the LLW curriculum. In this case, participants developed the critical thinking skills to understand mindfulness and the need to adjust cognitive knowledge for more effective interactions with people from the new cultural environment. Alternatively, the relative closeness of U.S. and Dutch cultures may have made it easier to *bridge the gap* between recognizing and reconciling cultural difference (Holtbrugge & Englehard, 2016), allowing participants to strategize more comfortably.

Paired Sample Statistics										Pai	red Sample	e Test			
	Pre-Test	Pre-Test Post-Test Pre-Test Post-Test Post-Test Paired Differences													
											<u>98.75%</u>	CI of the	f(df = 21)	Sig.	Effect Size
		М	1	SD	2	SE		М	SD	SE	Diffe	rence	i(aj - 51)	2-tailed	(Cohen's d)
Subscale											Lower	Upper			
MOT	5.79	6.22	0.55	0.60	0.55	0.60	P1	-0.43	0.57	0.10	-0.70	0.15	-4.14	<.001	0.75
BEH	5.44	5.73	0.90	0.85	0.9	0.85	P2	-0.28	0.72	0.13	-0.63	0.06	-2.18	.037	0.33
COG	4.61	5.26	0.98	0.77	0.98	0.77	P3	-0.66	0.81	0.15	1.04	0.27	-4.45	<.001	0.74
MC	5.95	6.11	0.65	0.58	0.65	0.58	P4	-0.16	0.65	0.12	-0.47	0.15	-1.39	.180	0.26

#### Table 1. Paired-Sample T-Test Statistics for Four Subscales of CQ

*Note.* N = 31, MOT = Motivation, BEH = Behavioral, COG = Cognitive, and MC = Metacognitive

Table 2.	ANCOVA	Results for	or Post-Test	Scores of	f Motivationa	l CQ,	Considering	Pre-Test	Scores as	Covariate
						• • •	L)			

Source	<b>Type III Sum of Squares</b>	DF	Mean Square	F	р	Partial η <sup>2</sup>	Observed Power <sup>b</sup>
Corrected Model	4.717 <sup>a</sup>	2	2.359	10.667	< .001	0.432	0.981
Intercept	0.981	1	0.981	4.438	.040	0.137	0.530
Pre-Test Motivational Mean	4.160	1	4.160	18.812	<.001	0.402	0.987
Residency Status	1.870	1	1.870	8.459	.007	0.232	0.802
Error	6.191	28	0.221				
Total	1210	31					

*Note.* <sup>a</sup> R Squared = .432 (Adjusted R Squared = .392); <sup>b</sup> Computed Using Alpha = .05

With respect to the South Korea and Peru programs, while the curriculum design may have included metacognitive CQ elements, the language structures, cultural differences, and business practices may have created barriers to bridging the gap in identification, recognition, and reconciliation of cultural differences (Lee & Sukocu, 2007). For South Korea participants, pre-departure preparation focused on hierarchical business structures and practices, cultural communication styles, and building critical knowledge in an effort to ensure a successful internship placement. In the future, more emphasis on adaptive strategies may enable participants to be more effective in this dimension.

Much like metacognitive CQ, the motivational CQ subscale outcomes indicated that the Netherlands program resulted in significant gains (p-value = .001 between the pre-test and posttest administrations. The South Korea and Peru programs resulted in non-significant gains in this dimension. Because motivational CQ is the drive to act on newly gained knowledge and skills; it is a vital dimension of overall CQ. The participants in the Netherlands program indicated that they had a significant level of confidence in their abilities to interact with different cultures and to adapt their behavior in new cultural settings. Again, as with metacognitive CQ, this confidence may be related to the similarity of their cultures and language in Amsterdam. The motivational CQ mean differences for the South Korea and Peru programs did not indicate such confidence. When answering the item, I enjoy interacting with people from different cultures; both South Korea and Peru participants declined in their confidence from the pre-test to post-test administration. For the South Korea program, the decline may be a result of a failure to create coping mechanisms for dealing with the vast cultural and language differences within the internship placements and the general social interactions. Peng et al. (2015) concurred with the idea that an increase in motivational CQ indicates participant success in an international experiential learning environment. The decline in motivation of South Korea and Peru participants therefore indicates a serious problem for the overall success of the program. Even with a focus on critical knowledge and critical thinking skills in the pre-departure programming, South Korea participants declined in the area of motivation. This finding highlights the necessity of intentionally developing and maintaining motivation in participants so that they see value in interacting with individuals who are culturally different than themselves. Likewise, the differences among programs indicate that it may be necessary to tailor approaches to specific CQ dimensions based on the program location and participants. Further research and development of experiential pedagogical methods of praxis may be necessary to enable participants to increase in metacognitive CQ strategy building, leading to higher motivational CQ.

For the behavioral CQ subscale, all program participants showed positive growth but failed to achieve statistically significant growth from the pre-test to post-test. As with the previous dimensions, the Peru program findings may be linked to the small sample size and the program leadership's inexperience in implementing experiential learning curriculum. The faculty leader in the Netherlands program was intentional in curriculum design and implementation of praxis. Once again, mediating factors here may be the Western cultural way of life and common English language in the Netherlands. While this might have been an advantage in terms of metacognitive CQ, it may have also made the participants overly confident and comfortable in their own cultural learning communities. The result could have been an inability to perceive change in their own behaviors, or a reliance on strategies that worked well enough but did not represent significant change.

Finally, the last piece reported in the result section is an intriguing and unexpected finding. Based on an ANCOVA analysis for post-test scores, considering pre-test scores as covariate, the USresident participants showed statistically significant growth in terms of motivational CQ, compared to international students. This subscale consists of five items focusing on the individual's intrinsic drive to act or engage in cultural experiences and to learn about and function in a different culture. However, ANCOVA analysis of previous travel abroad experiences did not reveal any statistically significant differences. A factor to consider is that the international students were already experiencing education abroad by attending a U.S. university. They may have a more realistic view on what study abroad means and offers. Hence, although their motivational CQ increased through this internship intervention, it was not as large of an increase as for the domestic students. For instance, international students already know that they "can get accustomed to the shopping conditions in a different culture" (item MOT5, see Van Dyne et al., 2012, p. 390), as they are doing it in their current everyday life. They have already experienced "the stresses of adjusting to a culture that is new" to them (p. 390). Compared to domestic students, international students experience these phenomena on a more frequent basis during the academic year. Because the previous travel abroad item does not distinguish between short travel experiences and longer sojourns, we cannot presume that all the domestic U.S. students in the study had never lived outside the United States. However, it is likely that for many domestic students, this experience represented the first time living abroad and developing global awareness from outside the United States. Given that students outside the U.S. tend to be more aware of U.S. American culture than vice versa, it is possible that domestic students simply have more room to grow. This finding is encouraging in that it shows that domestic students can gain motivation from the internship abroad. On the other hand, though, this may raise concerns about cross-cultural psychometric properties of this scale, and cross-cultural validity and reliability of the underlying constructs (Bücker et al., 2016). As suggested by Sharma and Hussain (2017) further research is needed regarding this matter.

#### Conclusion

CQ is vital in the globalized world of business. Cultural diversity is pervasive in all areas of the marketplace and employers view employees who demonstrate CQ to possess a competitive advantage. For young professionals, an international internship that fosters cultural engagement and offers opportunities to develop greater CQ will set them apart as their careers begin. Developing the ability to function appropriately and effectively in intercultural environments takes intention, though. Thus, developing study abroad programming that incorporates the four factors of CQ is critical to ensure that intention turns into action.

#### References

- Ang, S., & Inkpen, A. C. (2008). Cultural intelligence and offshore outsourcing success: A framework of firm-level intercultural capability. *Decision Sciences*, 39, 337-358. https://doi.org/10.1111/j.1540-5915.2008.00195.x
- Ang, S., & Van Dyne, L. (2008). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 3-15). Routledge. https://doi.org/10.4324/9781315703855
- Bergsteiner, H., Avery, G. C., & Neumann, R. (2010). Kolb's experiential learning model: Critique from a modelling perspective. *Studies in Continuing Education*, 32(1), 29-46. https://doi.org/10.1080/ 01580370903534355

- Bücker, J., Furrer, O., & Peeters Weem, T. (2016). Robustness and cross-cultural equivalence of the cultural intelligence scale (CQS). *Journal of Global Mobility: The Home of Expatriate Management Research*, 4(3), 300-325.
- Cole, M., Engeström, Y., & Vasquez, O. (Eds.). (1997). *Mind, culture, and activity: Seminal papers from the Laboratory of Comparative Human Cognition*. Cambridge University.
- Dugard, P., & Todman, J. (1995). Analysis of pre-test-post-test control group designs in educational research. Educational Psychology, 15(2), 181-198. https://doi.org/10.1080/0144341950150207
- Dunn, O. J. (1961). Multiple comparisons among means. *Journal of the American Statistical Association*, 56(293), 52-64.
- Earley, P. C., & Ang, S. (2003). Cultural intelligence: Individual interactions across cultures. Stanford University.
- Holtbrugge, D., & Engelhard, F. (2016). Study abroad programs: Individual motivations, cultural intelligence, and the mediating role of cultural boundary spanning. *Academy of Management Learning & Education*, 15(3), 435-455.
- Institute of International Education. (n.d.). *Definition of study abroad*. Retrieved July 3, 2019, from http://www.iie.org/Programs/Generation-Study-Abroad/About
- Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Prentice-Hall.
- Lambert Snodgrass, L. (2015, May 24-29). *The live-learn-work learning cycle's impact on intercultural sensitivity* [Paper Presentation]. NAFSA Annual Conference, Boston, MA, United States.
- Lambert Snodgrass, L. (2017). The effects of internship abroad curricular experiential interactions on the cultural intelligence of program participants (Publication No. 10268203) [Doctoral dissertation, Purdue University]. ProQuest Dissertations and Thesis Global.
- Lambert Snodgrass, L., Hass, M., & Ghahremani, M. (2021) Developing cultural intelligence: Experiential interactions in an international internship program. *Journal of Global Education and Research*, 5(2), 165-174.
- Lee, L., & Sukoco, B. M. (2007, November 18-20). The effects of expatriate personality and cultural intelligence on the expatriate adjustment: The moderating role of expatriate [Paper Presentation]. 13th Asia Pacific Management Conference, Melbourne, Australia.
- Levene, H. (1960). Robust tests for equality of variances. In I. Olkin, S. G. Ghurye, W. Hoeffding, W. G. Madow, & H. B. Mann (Eds.). *Contributions to probability and statistics: Essays in honor of Harold Hotelling* (pp. 278-292). Stanford University.
- Lilliefors, H. W. (1967). On the Kolmogorov-Smirnov test for normality with mean and variance unknown. *Journal* of the American Statistical Association, 62(318), 399-402.
- Lin, Y. C., Chen, A. S. Y., & Song, Y. C. (2012). Does your intelligence help to survive in a foreign jungle? The effects of cultural intelligence and emotional intelligence on cross-cultural adjustment. *International Journal of Intercultural Relations*, 36(4), 541-552. https://doi.org/10.1016/j.ijintrel.2012.03.001
- Massey, F. J. (1951). The Kolmogorov-Smirnov test for goodness of fit. *Journal of the American Statistical* Association, 46(253), 68-78.
- NAFSA. (n.d.). *Trends in U.S. study abroad*. Retrieved July 3, 2019, from https://www.nafsa.org/policy-and-advocacy/policy-resources/trends-us-study-abroad
- Paige, R. M., Fry, G. W., Stallman, E. M., Josic, J., & Jon, J. E. (2009). Study abroad for global engagement: The long-term impact of mobility experiences. *Intercultural Education*, 20(1), 29-44. https://doi.org/10.1080/ 14675980903370847
- Peng, A. C., Van Dyne, L., & Oh, K. (2015). The influence of motivational cultural intelligence on cultural effectiveness based on study abroad: The moderating role of participant's cultural identity. *Journal of Management Education*, 39(5), 572- 596. https://doi.org/10.1177/1052562914555717
- Quay, J. (2003). Experience and participation: Relating theories of learning. *Journal of Experiential Education*, 26(2), 105-112. https://doi.org/10.1177/105382590302600208
- Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings*. Sage.
- Seaman, J. (2008). Experience, reflect, critique: The end of the "learning cycles" era. *Journal of Experiential Education*, *31*(1), 3-18. https://doi.org/10.1177/105382590803100103
- Sharma, N., & Hussain, D. (2017). Current status and future directions for cultural intelligence. *Journal of Intercultural Communication Research*, 46(1), 96-110. https://doi.org/10.1080/17475759.2016.1264444
- Stroh, L. K., & Caligiuri, P. M. (1998). Increasing global competition through effective people management. Journal of World Business, 33(1), 1–16. https://doi.org/10.1016/S1090-9516(98)80001-1

- Sun, S., Pan, W., & Wang, L. L. (2010). A comprehensive review of effect size reporting and interpreting practices in academic journals in education and psychology. *Journal of Educational Psychology*, 102(4), 989-1004. https://doi.org/10.1037/a0019507
- Van Dyne, L., Ang, S., & Koh, C. (2008). Development and validation of the CQS: The cultural intelligence scale. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 16-38). Routledge. https://doi.org/10.4324/9781315703855
- Van Dyne, L., Ang, S., & Livermore, D. (2010). Cultural intelligence: A pathway for leading in a rapidly globalizing world. In K. M. Hannum, B. B. McFeeters, & L. Booysen (Eds.), *Leadership across differences: Cases and perspectives* (pp. 131–38). Pfeiffer.
- Van Dyne, L., Ang, S., Ng, K. Y., Rockstuhl, T., Tan, M. L., & Koh, C. (2012). Sub-dimensions of the four-factor model of cultural intelligence: Expanding the conceptualization and measurement of cultural intelligence. *Social and Personality Psychology Compass, 6*(4), 295–313. https://doi.org/10.1111/j.1751-9004.2012.00429
- Vande Berg, M., Paige, R., & Lou, K. (2012). Student learning abroad what our students are learning, what they're not, and what we can do about it. Stylus.
- Westfall, P. H., & Young, S. S. (1993). Resampling-based multiple testing: Examples and methods for p-value adjustment. John Wiley & Sons.
- Williams, T. R. (2005). Exploring the impact of study abroad on students' intercultural communication skills: Adaptability and sensitivity. *Journal of Studies in International Education*, 9(4), 356-371. https:// doi.org/10.1177/1028315305277681