

## Behavioral Manifestations of Intercultural Competence in Computer-Mediated Intercultural Learning

Lisa Mei-ling Chuang  
Dept. of Communication  
Hawaii Pacific University  
Honolulu, HI  
chuanglm@hawaii.edu

Daniel D. Suthers  
Dept. of Information and Computer Sciences  
University of Hawai'i  
Honolulu, HI  
suthers@hawaii.edu

### Abstract

*Online learning has led to an increase in globally distributed students and an increase in intercultural interactions. Within this setting, intercultural communication competence (ICC) is an important factor because easy connection does not necessarily guarantee effective communication. This paper looks at lessons learned from an online intercultural exchange of Thai and U.S. students regarding, behavioral manifestations of ICC in online environments and the influence that culture has on these manifestations. Implications are provided for designing cultural learning exchanges, and helping students develop ICC through improved assessments of ICC in online learning environments.*

### 1. Introduction

Learning online has become a convenient alternative to the traditional classroom. It has also led to an increase in globally distributed students—creating more intercultural interactions [1]. Within these intercultural learning environments, intercultural communication competence (ICC)—one's ability to develop a particular awareness of one's own and other's culture in order to adapt appropriately to culturally different contexts—becomes increasingly important. ICC is at its core about learning. Measures of ICC are taken to not only help employers/teachers gauge competency; they are also taken so that individuals can develop a sense of where they are and what they can improve on. The set-up of this study was originally used to examine the relationship between ICC and communication effectiveness in a computer-mediated intercultural exchange between Thai and American students. These findings appear in a separate forthcoming paper. However, in the process of conducting the initial study, significant differences emerged between Thai and U.S. ICC scores leading to lessons learned about behavioral manifestations of ICC in online

learning environments and the influence that culture has on these manifestations. These findings have implications for designing online cultural learning exchanges and helping students improve ICC through better assessments of ICC that take into account influencing factors such as, language, affordances of the medium used to communicate, speaking partner motivation, and task performed.

### 2. Background

#### 2.1 Intercultural Communication Competence

Within face-to-face (FTF) settings, the measure of Intercultural Communication Competence (ICC) has traditionally been used to gauge the competence or intercultural sensitivity of employees being sent to work abroad in order to predict how successful they may be in adapting to new cultural settings and interacting with new cultural counterparts [2]. It is also used to help individuals improve their ICC by giving them a sense of where they are and areas for improvement. After a comprehensive review of the literature (138 articles and books) Fantini and Tirmizi offered the following definition of ICC, "a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself" [3]. This particular study views ICC as one's ability to develop a particular awareness of one's own and the other's culture in order to adapt appropriately to culturally different contexts. The field of intercultural communication/training has evolved from focusing on knowledge based approaches and training outcome variables (e.g. country specific, language learning) to experience or emotion based approaches to an emphasis on individual intercultural competence. The main variables that have risen from this emphasis on individual intercultural competence are knowledge, skills, and attitude [4,5] with some inclusion of behavior [6].

## 2.2 ICC in Intercultural Computer-Mediated Learning

Several projects link students from different cultures together through intercultural exchanges. For example, CULTRA, a web-based cross-cultural project, utilized a comparative approach that asked participants to observe, compare, and analyze each respective culture [7]. Further projects point to the importance of student motivation and ICC in the success of online exchanges [8]; [9]. For example, O'Dowd highlighted ICC as essential to successful versus unsuccessful intercultural email exchanges [9]. Those who had greater ICC tried to develop a relationship with their partner by taking into account the rules of their language, asking questions that encouraged conversation, providing personal opinions, and being sensitive to their partner's needs.

Furthermore, while some studies have emphasized cultural communication styles as leading to a "breakdown" in intercultural communication [10]; [11], others have argued that we should not be so quick to accept particular communication styles as a particular culture's way of communicating [12]. For example, Hanna and de Nooy's study [13] of email exchanges between non-native and native speakers found intercultural competence as occurring "one-way"—successful communication in an online forum was determined by native speakers who decided what constituted culturally acceptable behavior within that particular forum. While culturally specific styles of communication may contribute to the success of the intercultural exchange, online participants may also generate a "third" culture during their intercultural interaction, to which traditional categorizations of culture may no longer apply [14]. Finally, Belz [15] points out that "problems" in intercultural communication can be opportunities for learning with proper pedagogical intervention and the aim should not be to smooth these "problems" away.

## 2.3 Measuring ICC

There are numerous measures/scales/indices available for intercultural competence (e.g. IDI; CCSS; IBAI). An extensive list of intercultural competence measures can be found, among others, in Humphrey's report on the state of knowledge in intercultural communication competence written for the National Center of Languages [2]. However, some consistencies can be found across these models and measures, including the use of intercultural competence measures to assess the readiness of clients for international assignments or intercultural training, and an emphasis on personal attributes/traits

to gauge/predict intercultural communication competence (e.g. awareness, skills, knowledge, attitude, behavior). However, actual behavior, rather than internalized intentions, is used by others to determine intercultural competence [16]. Therefore, this study primarily focused on behavioral assessment rather than self-report. The Intercultural Competence Assessment Project (INCA) was adapted for this study as a measure that provides a behavioral assessment and integrates various models within their model/measure (e.g. Ward [17]; Bennett [18]; Byram [19]; Kuhlmann & Stahl [20]). INCA tools were based off of the European Multi-dimensional research of Byram Kuhlmann Muller-Jacquier & Budin [21]. The aim of the INCA project was "to develop a valid framework of intercultural competence and robust instruments for assessing intercultural competence to meet the needs of employers" [22]. Even though the project ended in 2004, the framework and assessment tools are continually tested, evaluated and refined. The full INCA assessment consists of a portfolio that includes: Biographical Information (e.g. age, sex, experience abroad), Intercultural Profile—multiple choice situations that encourage reflection on previous intercultural experience, "What would you do" scenarios, and Role-playing behavioral assessment. For the purposes of this study, biographical/intercultural experience was assessed and the behavioral assessment for role-playing was adapted as it was the only measure that gauged actual observed behavior. The measures section below describes in more detail how this measure was adopted for this study.

## 3. Methods

The purpose of this paper is to examine lessons learned through an online intercultural exchange between Thai and U.S. students regarding (1) behavioral manifestations of ICC and (2) the influence that culture has on these manifestations. The following describes the participants, procedures, and the measures used in this study.

### 3.1 Participants

Thirty-three students in a 300 level Intercultural Communication online class at the University of Hawaii at Manoa (UH Manoa) and 33 students (Banking and Finance Majors) in an English for Finance class at Phayao University in Thailand participated in a four week online exchange via Facebook. Altogether, 16.7% of the participants were male and 83.3% were female (both Thai and U.S.).

**Table 1. Weekly Discussion Tasks**

<i>Description</i>	<i>Aim</i>
<b>1. Intracultural Exchange</b>	
Students describe American/Thai culture with an assigned intra-cultural partner	Get accustomed to using Facebook; Cultural-self awareness
<b>2. Introductory Letter</b>	
Students introduce themselves and tell their partner what they suspect would be different or similar if they were to visit each other's hometown	Get to know partners; Reflection on cultural differences and similarities
<b>3. Word Association</b>	
Students are presented a list of words, such as "good food" and "family" and "Religion" and are asked to write the associations they have for each word. They then compare these words with their partner.	Awareness of connection between culture and language
<b>4. Comparative Expressions</b>	
Students are asked to complete a list of comparative phrases (e.g. As good as...As black as...). Students compare their phrases with their partners and explain possible origins and significance.	Awareness of connection between culture and language through comparison of different connotations
<b>5. Good-byes</b>	
Students are asked to reflect on their experience and discuss what they learned from this experience	Learning how to "wrap-up"; Encourage reflection on experience

The average age of participants was 21 (SD=2.17). Seven students were eliminated from the data analyzed from task two and 9 from task four because they either did not interact with their partner or did not fill out a required survey, resulting in 26 students from UH Manoa and 26 students from Phayao University for task two (n=58), and 24 students from UH Manoa and 24 students from Phayao University for task four (n=52).

### 3.2 Procedure

Thai and U.S. participants were given randomly assigned cross-cultural partners. Participants were given simple tasks each week (e.g. introductions, word associations, comparative expressions, good-byes) and asked to interact with their partner via wall posts on a closed Facebook group page created specifically for the project. Although other forms of communication exist on this platform (e.g. synchronous chat), wall posts were chosen because participants could not synchronously chat unless they "friended" their partner (which we could not require them to do), and differences in time zones made use

of synchronous interaction impractical. Therefore, only asynchronous posts were used, and students did not interact with their partner outside of the wall posts.

The tasks (Table 1) have been adapted from O'Dowd, who used word associations and comparative expressions in a year-long email exchange between English learners of Spanish and Spanish learners of English [9]. In order to encourage discussion, words used in the word associations and comparative expressions were changed to fit the cultural frames of Thai and American students. The goal of tasks such as word associations and comparative expressions was to encourage discussion and thought about the connection between language and culture. This goal is similar to Belz's [15] discussion on parallel texts, which encourage students "to critically reflect on the ways in which others might evaluate the students' own culture(s) based on the texts produced by that culture." After each exchange, participants were asked to fill out a survey on their intercultural exchange experience for that week. The interaction was conducted entirely in English. However, surveys and instructions were provided in Thai for Thai participants.

### 3.3 Measures

**3.3.1 Coding ICC.** The INCA method was adapted to code the Facebook exchanges between intercultural partners (Thai and U.S). Tasks two and four were coded for ICC, as task two captures early interactions and task four captures the interaction mid-project. Task one of the project was an "intracultural" exchange, where participants interacted with their own culture first. Therefore, task two is actually the first intercultural interaction. Thus, these represent two task types: the more social environment of introductions and the structured-work-focused environment of comparative expressions (Table 1). Tasks three and four were quite similar and yielded similar responses. Task five "wrapped up" the project and consisted mainly of "nice to know you" type of responses. Future studies should examine the other task types.

Facebook exchanges of intercultural partners were coded along six variables: Tolerance for ambiguity, behavioral flexibility, respect for otherness, empathy, communicative awareness, and knowledge discovery. Dialogues were coded dialogue-by-dialogue, pair-by-pair, and variable-by-variable. Based on this coding, for each ICC dimension (six dimensions total) each participant was given a grade of basic (1), basic-intermediate (2), intermediate (3), intermediate-full (4), or full (5).

Participants whose exchange consisted of instances of more than one level were given a mixed level. For example, table 2 shows the original coding rubric for the dimension of Behavioral Flexibility. Adaptations for this study appear in brackets.

**Table 2. Behavioral Flexibility**

<b>Basic</b> 1__ Frequently ignores reactions from the other culture. 2__ refuses to deviate from the assigned task. [Tends to post as if bullet pointing class requirements rather than interacting with their partner] 3__ insists on sticking with one approach to communicating. 4__ is not alert to the signal from others.
<b>Intermediate</b> 1__ sometimes pays attention to signals of others 2__ pays attention to reactions of other culture, but not consistently 3__ points out only one solution
<b>Full</b> 1__ modifies approach [changes the way they would normally speak or interact with their partner] 2__ copies behavior of other culture [Tends to mimic the type of information provided (based off of what their partner told them) or mimic the style in which it's presented (based off of their partner's style)] 3__ points out various solutions 4__ pays attention to the signals of others and modifies reactions accordingly [Responds to what partner says in a previous posting in a way that shows they understand/acknowledge it]

Confirmatory factor analysis (CFA) indicates that the proposed measurement model fit the six dimensions of ICC used within this study. To achieve inter-coder reliability, ten randomly selected dialogues (out of 30) were coded by another coder. The primary coder has served as a Peace Corps Volunteer in Thailand (2007-2009), speaks the language at an advanced level, and regularly returns to the country. However, to mitigate cultural bias, a second coder native to Thailand was selected. After coding separately, the second coder participated in a dialogue with the principal coder to explain their choices in coding. Discrepancies between the coders were discussed until a resolution was agreed upon, and coding was then revised accordingly. For each dimension of ICC, inter-coder reliability (K Alpha) ranged from .70 to .97 for both U.S. and Thai participants. Details of how each ICC indicator was manifested in the Facebook exchange are discussed in the next section.

**3.3.2 Affordances.** Appropriation of affordances was examined through social cues—physical (e.g. nonverbal) and non-physical (e.g. psychological, social dynamic)—used to aid in effort of achieving

the goals of ICC (e.g., adapting communication patterns by clarifying terms is used to increase communicative awareness). Social cues are verbal (feelings, empathy, humor, praise cooperation) or non-verbal (kinesics, paralanguage, proxemics) clues that guide social interactions. Participant exchanges were open-coded line-by-line. Units coded ranged from single words, sentences, to paragraphs that contained one particular instance indicative of ICC behavior for one idea or topic.

**3.3.3 Open-ended question.** At the end of the final week, participants reflected on the entire exchange through one open-ended question, which asked them to,

*Write a descriptive paragraph that evaluates your overall intercultural exchange experience over the past five weeks. Please provide specific examples from your exchange experience/interaction to help illustrate your point of view in your evaluation.*

This question was used to aid in interpretation of the results as participants' own reflections on their experience might give clues, ground our speculation and provide participants with a voice.

## 4. Results

The following results section will first provide behavioral manifestations of ICC as used on Facebook during the intercultural exchange for task two. This will be followed by task four, comparison of the two cultures within each task, appropriation of affordances, and open-ended question responses.

### 4.1 Task Two: Manifestations of ICC in CMC

Guidelines provided by the original INCA coding tool have normally been used for FTF settings. This study attempts to interpret these guidelines for intercultural exchange on Facebook, which was limited to posts. The following results detail the behavioral manifestations found for indicators of ICC. Examples are provided as posted, including errors in grammar/punctuation, which are common on Facebook posts. Personal information, such as names of participants, has been removed.

**4.1.1 Respect for otherness.** No indicators of the basic level were found. However, indicators of the *immediate* level included having a neutral approach towards other cultures. This means they did not really specifically mention the other culture or their partner (neither negative nor positive). Posts containing *full* indicators included valuing and respecting the norms of the other culture—meaning they made comments about being excited to learn about other cultures and

differences, etc. For example, *"I hope to learn more about what happens in other countries and how people interact with each other."* In addition, posts consisted of indicators of making positive statements about the other culture. For example, *"Can you introduce Hawaii food for me ??? I believe Hawaii food delicious same Thai food too. ^\_^"*

**4.1.2 Communicative awareness.** Indicators of the *basic* level included not adapting communication patterns to the situation, including not explaining things in a way that was understandable to someone outside of their culture. For example, the following post includes culture-specific terminology. *"Hawaiian food is delicious. There is lau lau, Kalua pig, sweet potato, and more...you should try shave ice, its quite popular to many visitors of Hawaii."* Indicators of the *intermediate* level consisted of being able to address misunderstandings. For example, apologizing for English or slow/late replies, and answering questions their partner had or providing clarification. Indicators of the *full* level included adapting communication patterns completely to a new situation—consistently explaining things so that someone who is from a completely different culture will understand. For example, the following posts adapt communication patterns by explaining what certain foods are and changing Thai Baht to U.S. Dollar currency. *"Some of my favorite local foods are Kalua Pig & Cabbage (pulled pork), poke (raw fish) and haupia (coconut)..."* and *"so if you come to Thailand you should try tom yum kung ( 2-3 dollar ) / somtam ( 1-2 dollar ) / pad thai ( 1-2 dollar ) massages about 7 dollar (maybe)..."*

**4.1.3 Empathy.** Indicators of the *basic* level included not identifying with others—not mentioning the partner or partner's culture; simply providing information about themselves. In addition, posts also included the tendency to identify with one's own feelings—mostly talks about themselves; does not mention their partner or partner's culture. For example, *"I also want to get a better understanding of the culture because I am minoring in Ethnic Studies and I also think that this will help me with my studies."* Indicators of *intermediate* consisted of partly identifying with others: although they lack fundamental knowledge, they still try to identify with their partner by making educated guesses about what their life must be like or how they might be feeling. For example, *"Thailand has a more linear culture and set of traditions. Am I wrong in saying that? I really don't know anything about Thailand but I would love to learn!"* Full indicators include being able to take the other's perspective. For example, *"It must be hard translating to English for us, and I give*

*you credit and say thank you. Because otherwise it would be very hard to communicate haha,"*

**4.1.4 Behavioral flexibility.** There were very few instances of the *basic* level. Posts coded for *basic* included refusing to deviate from the assigned task—tending to post as if addressing class requirements rather than interacting with their partner. Posts containing *intermediate* indicators included paying attention to the reaction of other cultures but not consistently. For example, the participant makes an attempt to help their partner understand the meaning of the foods they list; however, they only provide a link for "Nam Phrik Ong" and do not explain "Sai Aua" and "Kaeng Hung Le. Posts containing *full* indicators consisted of copying the behavior of the other culture—tending to mimic the type of information provided (based off of what their partner told them) or mimic the style in which it's presented (based off of their partner's style). For example, *"Hi...or I shall say SA-WAT-DEE-KA from Thailand,"* copies the pattern of her partner who introduced herself by saying, *"Hi...or shall I say ALOHA from Hawaii."*

**4.1.5 Ambiguity tolerance.** No posts contained indicators of the *basic* level of ambiguity tolerance. Posts were coded for *Intermediate*—pays attention to some differences—when participants offered vague explanations about similarities and differences (e.g. not descriptive), such as only talking about weather differences. For example, *"I imagine Thailand to be a little similar to Hawai'i where there are areas of countrysides and areas that are modern and civilized."* Posts coded for the *full* level of ambiguity tolerance included indicators of expressing satisfaction in working with their partner. For example, expressing things like, *"that's interesting,"* or *"Wow"* in order to demonstrate satisfaction in what their partner posted.

**4.1.6 Knowledge discovery.** Within the *basic* category, posts included indicators of not asking for background information about the other culture, as students mainly talked about themselves and their own culture with little/no inquiry into the other's culture. Within the *intermediate* category, posts posed indirect/vague questions (e.g. I would like to learn more about Thai culture) or did not ask questions related to culture. For example, *"I think that our hometowns could be similar because of the fact that a lot of people know each other? I also think that your hometown could be different because it may be bigger than mine?"* *"For Hawaii is so hot?"* Within the *full* category, posts included indicators of asking for cultural background information



**Figure 1: Task 4 Comparative Expressions**

specifically to understand the other's culture better. For example, "Is it true that people at home usually sit on the floor but don't stretch their legs out? Just curious, that's what I read." And "I want to know about music of hawaii I hope you answer to me > <."

## 4.2 Task Four: Manifestations of ICC

In contrast to task two, in which participants were asked to introduce themselves and discuss their cultures, task four asked participants to complete simple word associations (e.g. As black as \_\_\_\_ ) and examine differences, similarities, and possible reasons for differences. Task four can be characterized as a more structured-work-focused environment than task two, which was more social in nature. Task four was coded in the same manner as task two. Due to the structured-work-focused environment of task four, participants had a tendency to just do the assignment with little socialization. Participants scored low in *behavioral flexibility* if they did nothing more than post the assignment with little socialization or interaction with their partner. *Behavioral flexibility* within task four essentially measured whether or not you actually interacted with your partner.

Engaging in certain dimensions of ICC can actually lead to greater misunderstanding and face threatening behavior. For example, the exchange in Figure 1 is one example from task four in which engaging in more *ambiguity tolerance*, *knowledge*

*discovery*, and *communicative awareness* actually led to greater misunderstanding and possible embarrassment. This example also shows that this particular pair relied heavily on text to communicate with each other. However, greater understanding may have been achieved through the posting of pictures to illustrate, for example, what a pestle and mortar is. Participants did not utilize all the affordances available to them in an online intercultural environment.

## 4.3 Culture and Behavioral Manifestations: Thai vs. U.S.

A one-way between groups multivariate analysis of variance (MANOVA) was performed to investigate differences between U.S. and Thai ICC scores. The six dependent variables that make up ICC were used and the independent variable was nationality. Preliminary assumption testing was conducted to check for normality, linearity, homoscedasticity, homogeneity of variance-covariance matrices, and multicollinearity. For task two, there were no serious violations noted. However, in task four, an analysis conducted using SPSS Frequencies shows negative kurtosis slightly outside of the acceptable -1 to +1 range for the ICC variables (-1.67). Attempts to normalize these variables did not resolve the issue. ICC scores were bimodal. This is because, for task four, U.S. participants ( $M=12.5$ ,  $SD=3.56$ ) tended to score higher than Thai participants ( $M=10$ ,  $SD=3.3$ ); therefore, the data is peaked in two different areas with the lower peak representing Thai participants and the higher peak consisting of U.S. participants.

For task two, there was a statistically significant difference between U.S. and Thai ICC scores on the combined dependent variables,  $F(6, 51) = 2.55$ ,  $p = .031$ ; Wilks' Lambda = .77; Pillai's Trace = .23; partial eta squared = .23. When the results of the dependent variables were considered separately, the only difference to reach statistical significance, using a Bonferroni adjusted alpha level of .008, was *knowledge discovery*,  $F(1, 56) = 7.92$ ,  $p = .007$ , partial eta squared = .124. For this variable, Americans scored slightly higher ( $M = 3.76$ ,  $SD = .99$ ) than Thai participants ( $M = 3.10$ ,  $SD = .77$ ).

For task four, there was a statistically significant difference between U.S. and Thai ICC scores on the combined dependent variables,  $F(6, 45) = 2.53$ ,  $p = .034$ ; Wilks' Lambda = .75; Pillai's Trace = .25; partial eta squared = .252. When the results of the dependent variables were considered separately using a Bonferroni adjusted alpha level of .008, the only difference to reach statistical significance was *respect*

for otherness,  $F(1, 50) = 10.33$ ,  $p = .002$ , partial eta squared = .171. For this variable, Americans tended to score slightly higher ( $M = 3.85$ ,  $SD = 2.02$ ) than Thai participants ( $M = 3.08$ ,  $SD = .69$ ).

#### 4.5 Appropriation of Social Cue Affordances

In regard to non-physical cues, for task two, accommodating for partner's interests (e.g. trying to find something in common with partner) emerged as the most prominent category. This was followed by explaining special terms, paying attention to partner's feelings, and expressing satisfaction/complimenting partner. For task four, the non-accommodative behavior of not acknowledging partner's post or interests was found to be the most prominent category. This was followed by expressing satisfaction/complimenting partner. The main types of non-verbal/physical social cue behaviors used were paralanguage (e.g. laughter, accentuation, etc.), and kinesics (e.g. emoticons), which were used to accentuate messages, soften or create a warm feeling of a message, or express some sort of satisfaction. There was very limited use of posting pictures, links, or videos.

#### 4.6 Open-ended questions

Overall, the open-ended responses reveal concerns about depth and motivations of participants (e.g. learning about culture; making foreign friends). For example one U.S. participant wrote,

*"...I don't think the conversations were "deep" enough for me to really understand my partner and my partner's culture. Sure I found out she is friendly and sweet, and a little about what is important to her, but that's about it."*

This sentiment was further emphasized by Thai participants (although to a lesser degree than U.S. participants), as one Thai participant wrote,

*"The knowledge is not deep/profound because there are not many questions (in the activities) and we didn't have many chances to talk. We knew each other superficially."*

However, Thai participants seemed to be more concerned with the opportunity to interact with "foreigners" than their American counterparts.

*"This project gave me the opportunity to exchange culture with my friend. And I can give/tell about my culture to my friend who can understand. I got a friend who is a foreigner. Speaking together cheerfully, we understand each other nicely."*

The open-ended questions reveal improvements that can be made for future exchanges, discussed below.

### 5. Discussion

It is possible to adapt behavioral assessments of ICC in online intercultural learning environments. However, these behavioral manifestations are influenced by culture, in which a significant difference between ICC scores of Thai and U.S. participants points to implications that language and task have on measuring ICC, intercultural exchange design, and ultimately, intercultural learning

#### 5.1 Culture, language and task

It is clear that language plays a role in assessing ICC. ICC can occur "one-way" as native speakers set the tone for what is considered successful communication and culturally acceptable behavior [13]. Similarly, coding for indicators of ICC shows us that for certain variables, such as *behavioral flexibility*, indicators of full competency consisted of things like modifying your behavior to match that of your partner. However, in a computer-mediated environment, this matching of behavior seems to be influenced by language, such that the tone for what is considered competent behavior is set by the native speakers in the exchange. This type of indicator demonstrates what non-native speakers may do to increase their intercultural competency in CMC environments, but it does not tell us what native speakers should do to increase their competency. In addition, variables such as *communicative awareness* require an ability to consistently explain jargon so that someone from a completely different culture will understand, for example, explaining that "poi" is taro or that "poke" is seasoned raw fish. In this situation, native speakers, with more language ability to explain cultural jargon, have an advantage.

However, considered separately, *knowledge discovery* appeared as the only ICC variable to reach statistical significance, with Americans scoring higher than Thai participants. The Thai value system places the concept of "*Greng Jai*"—consideration for the feelings of others—as one of its most important values [23]. "*Greng Jai*" means trying to avoid inconveniencing others with the ultimate goal of giving and saving face. This concept has implications for the ICC variable of *knowledge discovery*, which requires participants to directly ask their partner questions about their culture in order to gain understanding. "*Greng Jai*" also influences the general Thai view of someone who asks too many questions or is curious, which is not seen as a positive quality in Thai culture. Chaidaroon [24] views Thai competent behavior as including: Shyness, awareness of hierarchical structure, reluctance to ask favors,

being “Greng Jai” and humility. Therefore, language aside, American participants tended to drive the interaction by asking questions. Thai partners tended to respond to their questions, but did not post many questions in return, partly out of consideration for their partner (or other factors such as time or language ability). This can be interpreted as disinterest by American participants and appropriate behavior by those on the Thai side.

Within task four, there was a statistically significant difference between U.S. and Thai ICC scores on the combined dependent variables. However, considered separately, *respect for otherness* appeared as the only ICC variable to reach statistical significance. For this variable, Americans tended to score slightly higher than Thai participants. *Respect for otherness* required that participants make positive comments about the other culture in order to demonstrate acceptance of the other. However, task four consisted of a comparative expressions task, which required that participants finish popular expressions, such as “What as \_\_\_, Black as \_\_\_, Quite as \_\_\_” etc. Within task four, U.S. participants had higher scores than their Thai counterparts because Thai participants tended to do little outside of posting the required assignment. This difference in scores is related to language, as Thais tended to score lower than U.S. participants, who could more easily respond due to their greater command of English. Since the coding for ICC scores is dependent upon interaction beyond the prescribed task (e.g. socialization), language knowledge is essential for this type of interaction. Language is related to the difficulty of the task, where some tasks (such as that presented in task 4), require more language skills than others.

## 5.2 Affordances

Each type of physical cue (e.g. nonverbal) aided in achieving the goal of the particular non-physical (e.g. psychological/social dynamic) category in which it was found. For example, in “explaining special terms,” which is a manifestation of the ICC variable *communicative awareness*, non-verbal cues are used mainly as paralinguistic that helps in clarifying the message (e.g. “it is pronounced “SH..BLEE”), display excitement (e.g. “their food is incredible!”), display tentativeness (“i don’t know price of elephant ride ☹ ...sorry.”), and kinesics—emoticons used to soften messages. From this perspective, users were indeed able to adapt textual affordances to help meet goals of ICC. However, the limited or non-use of social cues in “non-covergent” behavior typical of exchanges in a structured-work-

focused environment compared to its frequent use within more social environments tells us that using social cues is an essential part of ICC in intercultural online exchange. This finding further emphasizes the importance of considering the context (e.g. social vs. structured-work-focused environment) when it comes to measuring ICC and conducting intercultural exchanges online. Social context can influence the use of social cues in CMC environments, which are essential in establishing common ground [25] and the formation of social capital needed for future interactions [26; 27]. In addition, participants relied mostly on text with only a few instances of using pictures/other links (e.g. video, audio) to help clarify messages. Although users had access to these types of links to help clarify what they could not explain in words, few elected to do so.

## 5.3 Implications for Adapting ICC Measures and Online Intercultural Learning

Training and learning in intercultural interaction has evolved over time from country specific information to experience/emotion based to focusing on individual competence [28]. However, there is still a need for integration of individual competence and systems (networks) and their transformation [28]. Thus, future research should seek to move attention away from the individual and look at contextual factors, such as setting, language, and culture. Practitioners should be aware of this so that they may help their participants/employees/students more clearly see where they may need improvement by providing them with a bigger picture of ICC that includes cultural environment, language, affordances of the medium used to communicate, speaking partner motivation, and task performed.

Furthermore, the ICC approach is missing a consideration of the interactants’ motivations [29]. Based on the open-ended responses, it seems that Thai participants were more motivated by making foreign friends and practicing English than their U.S. counterparts, who desired to have an in-depth cultural exchange. This finding is of interest because developing friendship and depth of communication are not what Facebook was designed for—maintaining existing relationships initially formed offline rather than creating new relationships online [30]. With this in mind, suggestions can be made for how to improve intercultural online exchange. First, lack of depth can be attributed to a lack of “presence.” Something as simple as activities that allow interactants to express themselves in a greater variety of ways, such as activities involving posting pictures/videos, which can overcome the boundaries



of language, may help to increase the feeling of openness and depth. Participants also commented that some of the activities were too basic and did not encourage interaction beyond simple comparisons. Thorne talks about “intercultural communication in the wild” in which learning utilizes activities that are less controlled and allows for, “opportunities for intercultural exchange, agentive action and meaning making” [31]. Thus, less structured/open-ended activities may provide participants with more opportunities to connect with their partner in a way that is constructed through the interaction rather than prescribed by the teacher or researcher. If participants are allowed more freedom in their interactions to generate their own meaning, they will have more opportunity to move beyond bi-polar cultural distinctions and generate a “third” culture [14].

Based on this study, the following suggestions can be made:

*First*, Facebook is a social medium by nature; therefore, it should be used for inherently social activities. Participants should not be restricted to highly structured assignments, which seem like work. Therefore, learning activities should be loosely designed so that participants are not confined to the task at hand and are encouraged to go beyond the prescribed assignment. Activities should encourage participants to use the affordances of the medium, such as posting pictures, videos, or links that may help encourage specific information to be learned in a more social way.

*Second*, the advantage of using Facebook in learning activities is that it keeps a record of activity that can be reviewed at a later time (reviewability). This record can be used as a resource by allowing participants to reflect on prior activity. Therefore, activities should be structured so that participants build off of the activity from prior weeks. The set-up of activities for this study consisted of weekly activities that did not encourage this type of build-up. Thus, even though participants started to establish a rapport with their partner during introductions, the flow of the interaction was cut-off by the next week’s task, which did not build off of this established rapport. Future use of Facebook as an intercultural learning tool should utilize the advantage that posts have for reflection and encourage students to build-off of their previous weeks’ interactions.

*Third*, Facebook allows us to keep tabs on our friends’ activities. Although posting mundane daily activities may be a nuisance for some, this function of Facebook could actually be utilized to encourage learning about cultures in online intercultural settings. Through tagging their partner, participants on Facebook would let their partners know of their

activities throughout the day—where and what they are eating, etc.—so that participants are allowed to gain a better understanding of their partner’s culture and life. This would increase mutual awareness of each other and encourage a feeling of “connectedness.”

## 6. Conclusion, Limitations, and Future Studies

Overall, this study provides important considerations for adapting ICC measures to examine online behavioral manifestations and designing intercultural exchanges using computer-mediated/social media platforms. We should reconceptualize the way we adapt ICC measures and design exchange activities by taking into consideration the cultural environment, language, affordances of the medium used to communicate, speaking partner motivation, and task performed. Through this reconceptualization, participants will receive a bigger picture of areas for ICC improvement.

However, like most studies, it is not without its limitations. The data from task four did not meet the assumptions of “normally distributed data”, but this data further illustrated differences between Thai and U.S. scores. Only asynchronous wall posts and Thai and U.S. participants were used for this study. Future studies should examine utilization of other platform affordances, such as synchronous chat, and other cultural groups. Furthermore, future studies will add onto the findings of this paper by examining the relationship between ICC and communication effectiveness as further measured within this study.

## 7. References

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