## Running Head: EXPLORING INTERCULTURAL COMMUNICATION

# Exploring the Emotional and Cognitive Levels of Uncertainty through Intercultural Communication Intervention

by

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## Exploring the Emotional and Cognitive Levels of Uncertainty through Intercultural Communication Intervention

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#### Abstract

With college and university students in America increasingly interacting with international students, levels of communication and whether or not there is understanding between the two parties is becoming an important topic. Looking at students at Youngstown State University specifically, participants were asked to voluntarily take part in a survey that tested levels of uncertainty, anxiety and competency in regards to intercultural communication. Participants then had a direct interaction with international students, and completed a post-test to determine the outcome. Specifically, participants were tested to see if there was any difference in anxiety, uncertainty and competency levels. The results show that young adults tend to exhibit an openness to those of different cultures.

#### **Human Subjects Approval**



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October 16, 2016

Dr. Rebecca Curnalia, Principal Investigator Ms. Katilyn Hartwig, Co-investigator Department of Communication UNIVERSITY

RE: HSRC Protocol Number: 032-2017

Dear Dr. Curnalia and Ms. Hartwig:

Title: Exploring the Emotional and Cognitive Levels of Uncertainty through Intercultural Communication Intervention

The Institutional Review Board has reviewed the abovementioned protocol and determined that it is exempt from full committee review based on a DHHS Categories 1 and 3 exemption.

Any changes in your research activity should be promptly reported to the Institutional Review Board and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly reported to the IRB.

The IRB would like to extend its best wishes to you in the conduct of this study.

Sincerely,

Mr. Michael A. Hripko Associate Vice President for Research Authorized Institutional Official

MAH:cc

Dr. Jake Protivnak, Chair
Department of Communication

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America is currently part of a globalized system where intercultural communication is one of today's trending topics. The turn of a newspaper page or online article reveals story after story about cultures not understanding one another. Anxiety uncertainty management theory (AUM) identifies several variables that can explain why people have a hard time with intercultural communication (Infante, Rancer & Womack, 2003).

Uncertainty about other cultures plays a major role in whether people effectively communicate with one another (Infante et al., 2003). The AUM variables explain intercultural interactions as a process of anxiety, uncertainty, and competence that affects communication.

For my thesis, I will be focusing on the anxiety and uncertainty levels of intercultural communication in undergraduate communication students. Through this study, I will look at intercultural understanding and intercultural tolerance by surveying students before and after direct interaction with international students. Utilizing the variables defined in the AUM, my study will hopefully help identify whether uncertainty about intercultural communication is a learned behavior that can be improved with direct experience communicating with people of other cultures.

#### **Literature Review**

Culture can be a broad term to define. Every individual can have a different perspective on what a culture is. It could be a group of individuals who share the same religion, ethnicity or educational background. However, when different cultures are brought in and mixed with a culture unlike their own, feelings of uncertainty and anxiety may be people's first response. William Gudykunst (1993), a former professor of

Communication at California State University, studied the reaction people have when holding a conversation or interacting with someone of a different culture. The idea is that the other person being communicated with is a stranger. When a stranger is brought into the mix, uncertainty about what the person expects from the interaction can cause anxiety. Gudykunst developed the anxiety uncertainty management theory (AUM) to help understand these feelings.

The idea of AUM was used to bring about training programs for intercultural adjustment (Gudykunst, 1998). In doing so, it was shown that strangers tend to feel a level of uncertainty and anxiety when interacting with someone they are unfamiliar with. Their levels of discomfort spike when it comes to those of other cultures, but training resulted in less anxiety and uncertainty (Stephan, Stephan & Gudykunst, 1999).

#### Anxiety

When it comes to anxiety in intercultural communication situations, it is the emotional state an individual may experience before interacting with a stranger (Stephan et al., 1999). The emotional aspect of uncertainty is similar to the cognitive level of uncertainty. Feelings of worry, apprehension, and unease are causes of anxiety prior to communication, hitting on the emotional aspects of a person when they are in a situation with someone they are unfamiliar with. Gudykunst (2002) explained that anxiety is a very emotional response, but it does typically go hand in hand with uncertainty, which he believes is more cognitive.

#### Uncertainty

Uncertainty is measured in two ways: cognitive and behavioral (Stephan et al., 1999). Cognitive uncertainty is reflective of knowledge of another culture prior to

interaction. This knowledge would be an understanding of how the other culture works in their communication. Behavioral is reflective of the expectations an individual has of how someone will behave in their interaction. Expectations would be what a person expects to happen during an intercultural interaction. Expectations could be different among cultures, as each culture tends to communicate differently and believes different habits are more acceptable during a social situation.

As Gudykunst continued his research of AUM, he and his colleagues continued to find that the effectiveness of communication truly depended on individuals' levels of uncertainty and anxiety when conducting conversations (Gudykunst & Nishida, 2001). Intergroups, characterized as groups of people who are unlike one another, can cause levels of anxiety and uncertainty to rise (Tajfel, Billig & Bundy, 1971). Each intergroup forms an ingroup, where individuals feel most comfortable communicating. When intergroups are brought together, stereotypes and misconceptions can affect the flow of communication, causing social categorization behaviors.

#### Thresholds

One of the biggest reasons there is resistance to intercultural communication has to do with individuals feeling uncertainty or anxiety about understanding other cultures, just as with most intergroup interaction (Tajfel et al., 1971). As Gudykunst (1993) found, there are certain thresholds for uncertainty. A maximum threshold allows an individual to have high levels of uncertainty and yet still be able to comfortably gauge a person's attitudes and behaviors while engaging in effective communication. The minimum threshold demonstrates an individuals' ability to communicate without feeling bored and overconfident in their skills. Gudykunst (1993) demonstrates that when an individual hits

levels below or above his or her minimum or maximum threshold, they participate in ineffective communication and this is when anxiety and uncertainty begin to play a role. As previously mentioned, and as the thresholds show, anxiety and uncertainty tend to work simultaneously.

#### Competence

William Howell (1982, as cited in Crandall, George, Gail & Davis, 2003) suggests there are four levels of intercultural competency:

- 1. *Unconscious incompetence* is when someone has no ability to comprehend that what they are saying is offensive to someone else.
- 2. *Conscious incompetence* is when an individual is aware that there is something wrong with what they are communicating, but are unsure how to fix or correct the situation.
- 3. *Conscious competence* is when people are very aware of what is being said, and makes note while participating in effective communication to always keep the other person's culture in mind.
- 4. *Unconscious competence* is what individuals are encouraged to be.

  This is exhibited when an individual can go into any situation and effectively take part in intercultural communication in a relaxed manner, without worry, and can take part in the conversation appropriately without over-thinking.

Education may play a role in assisting individuals to feel more comfortable communicating effectively with other cultures. Many colleges and universities now offer intercultural communication courses to aid in the process, which can include interaction

with international students. Campbell (2012) paired 30 international students studying at a university in New Zealand with native students for a semester. The international students ranged in cultural background, including American, Singaporean, Vietnamese, German, Malaysian and Indian. Campbell looked at a range of adjustments for the international students, but, most importantly, tested whether or not the native students perceived that the project played a role in their own intercultural communication competence.

The results were overall positive, showing that the native students noticed an enhanced awareness of different cultures, as well as learning to value the importance of sharing intercultural differences (Campbell, 2012). Students recounted their experience, many reflecting on the ways in which the interactions opened their eyes. Many of the examples included students indicating an increase in knowledge from direct interaction of customs and traditions from their intercultural partner. The results indicated they were less anxious and uncertain about the cultural differences as a result of the study.

H1: Direct interaction between students who are cultural strangers can decrease levels of uncertainty and anxiety.

RQ1: Do high levels of anxiety and uncertainty with intercultural communication relate to low levels of intercultural competency?

RQ2: After an intercultural interaction, do anxiety, uncertainty and intercultural communication competency levels change?

RQ3: Do outside factors, such as parents' education level, age, ethnicity and time spent outside the United States affect levels of anxiety and uncertainty in intercultural communication?

#### Methodology

For this particular study, I tested whether or not immersion and direct interaction with those of another culture helped curb the anxiety and uncertainty that can come with intercultural communication. Youngstown State University offers an intercultural communication (CMST 2610) course. Undergraduate students spend their semester learning about the ways in which other cultures communicate with one another. As part of the course, English Language Institute (ELI) students are brought into the mix for a cultural diversity project.

ELI is the university's pre-admission for international students. They must complete the required courses showing they are able to comprehend lectures and assignments in the English language before entering their program full-time (ELI Home, n.d.) I surveyed voluntary participants in CMST 2610 prior to the project with ELI to measure their anxiety and uncertainty levels related to intercultural communication, understanding of communicating with other cultures, and levels of perceived intercultural competence, as outlined in the literature review. I then observed the group of American and International students as they meet for the first time and communicated with one another in the classroom setting. After the students met, I surveyed voluntary participants in CMST 2610 again to measure their anxiety/uncertainty levels, understanding of diverse cultures and levels of intercultural communication competence.

#### Pre-test

For the pre-test, anxiety was measured using James McCroskey's (1997) *Personal Report of Intercultural Communication Apprehension* (PRICA) test. There were 14 statements that assess participants' level of agreement (Neuliep & McCroskey, 1997).

This measure was created to determine a person's apprehension with intercultural communication on a Likert scale of 1 to 5 where 1 = strongly disagree and 5 = strongly agree. This test is statistically reliable, and measures whether a person has a high, moderate or low level of communication apprehension. The  $\alpha$  is .81 with the M = 3.69 and SD = .52. See Appendix for copies of the surveys, including scale wording.

Competency was measured using the intercultural communication competency scale (Crandall et al., 2003). There were six statements that to help determine the competency level before the intercultural interaction. The  $\alpha$  is .52 with the M=3.74 and SD=.52.

Uncertainty was measured in two different ways: cognitive and behavioral. Cognitive uncertainty was measured by using the *Global Perspective Inventory* (GPI) (Iowa State University, 2015). GPI measures cognitive, intrapersonal and interpersonal perspectives, and is frequently used in educational settings. There were seven Likert items that determined the extent of agreement. It measured whether or not the students have prior knowledge or experience with intercultural communication and diverse cultures on a scale of 1 to 5. The  $\alpha$  is .71 with the M=4.05 and SD=.48. A second question was also incorporated to test levels of intercultural communication experience by asking if they have any previous training or educational experience on a scale of 1 to 5 where 1= strongly disagree and 5= strongly agree. The  $\alpha$  is .84 with the M=3.64 and SD=.63. Behavioral uncertainty was measured by asking about students' tendency to be hesitant or more confident in intercultural interactions.

The pre-test ended with five demographic questions about time spent outside the United States, questions asked about participants' grade, age, ethnicity and parents' education.

#### Interaction

The participants spent time with international students during their regularly scheduled class time. Many reported having a positive interaction, where communication flowed freely and effectively. One participant in particular noted that their dialogue was difficult and felt uncertain of the outcome.

Participants reported back to their professor stating they enjoyed the project. Many felt this was a unique experience, and better helped them understand how international students within the university think and feel (J.Tyus, personal communication, November 10, 2016).

#### Post-test

The post-test measured the same variables: anxiety, competency, and uncertainty (cognitive and behavioral). Demographic questions about time spent outside the United States, grade, age, ethnicity and parents' education were also included.

Anxiety was measured by looking at positive and negative feelings that the students may have felt during the interaction. They rated each adjective on a 1 to 5 scale, 1 = strongly disagree, 5 = strongly agree. The positive measures are confident, relaxed, composed and calm. The negative measures are uneasy, tense, apprehensive and insecure. The  $\alpha$  is .9 with the M = 2.74 and SD = .47.

Competency was measured with two questions. The first was based on the four levels of intercultural communication competency, having the students identify where

they best fit after their interaction. The same six statements as the pre-test were included to determine if there was any difference. The questions were a Likert scale of 1 to 5, 1 = strongly disagree and 5 = strongly agree. The  $\alpha$  is .65 with the M = 3.86 and SD = .61.

Uncertainty was measured again in two parts: cognitive and behavioral. Cognitive looked at the knowledge post-interaction, using the same statements from the GPI used in the pre-test. This indicated perspective changes post-interaction. Behavioral questions had the students thinking of their pre-interaction expectations and deciding whether or not those expectations were met. A Likert scale of 1 to 5 was used, 1 = strongly disagree and 5 = strongly agree. The  $\alpha$  is .88 with the M = 4.04 and SD = .53.

#### **Participants**

A pre- and post-test was administered to volunteers in the CMST 2610 course at Youngstown State University. The pre-test was given two weeks prior to a direct intercultural interaction. The post-test was given the Tuesday following the direct intercultural interaction. During the direct interaction, American students were given the opportunity to speak with students from Asia and the Middle East for a 50-minute period during regularly scheduled class time. The pre-test had an N of 16, while the post-test had an N of 14. The participant pool changed between the two tests, making it difficult to match the pre- and post-tests.

#### Results

**RQ1**. The first research question looked at whether or not high levels of anxiety and uncertainty are related to lower levels of competency. In the pre-test, the levels of anxiety and uncertainty were at a mean of 3.6 and 4.05, respectively. Each had a standard deviation of around .5, which concludes that the students tested felt somewhat

comfortable with intercultural communication. Overall, they felt good about going into an intercultural interaction.

In the post-test, the mean for intercultural anxiety actually went down to a 2.74. The standard deviation remained around the same (SD = .47). Uncertainty was also lower, at a mean of 4.04 and standard deviation of .53. However, competency stayed around the same in the post-test as it did the pre-test. As the AUM predicts, anxiety was correlated with competence (r = .71) at time 1 and (r = .73) at time 2. Uncertainty at time 1 was correlated with anxiety at time 2 (r = .56, p = .06) but was not correlated at time 1 (r = .06).

Table 1. Pre-test Correlations

	Anxiety	Uncertainty
Uncertainty	r = .06	
	p = .82	
Competence	r = .71	r =05
	p = .01	p = .84

Table 2. Post-test Correlations

	Anxiety	Uncertainty
Uncertainty	r = .56	
	p = .06	
Competence	r = .73	r = .79
	p = .01	p = .01

**RQ2**. The second research question asked whether a direct interaction would decrease anxiety uncertainty, and increase competency levels. As stated prior, the competency measurement was unreliable in the pre-test. In the post-test, it did appear to be a reliable measure, with an  $\alpha$  of .72 when self-censorship is removed from the measure. Comparing the means of the pre-test (M = 3.74) and the post-test (M = 3.86), it only increased by a small amount. The standard deviations hardly differed between the pre-test (SD = .52) and post-test (SD = .61) as well.

This suggests that, with this particular group, a direct interaction did not change the way they were feeling, which happened to be somewhat content and confident about the interaction. During the pre-test, they responded with how they would react in an intercultural interaction. The post-test, being very similar, suggests that they did react and respond in the way they had anticipated. They went into the conversation open, feeling comfortable and being respectful, for the most part.

Table 3. Means and Standard Deviation

	Pre-test	Post-test
Anxiety	M = 3.69 $SD = .52$	M = 2.74 $SD = .47$
Uncertainty	M = 4.05 $SD = .48$	M = 4.04 $SD = .53$
Competence	M = 3.74 $SD = .52$	M = 3.86 $SD = .61$

**RQ3**. The third research question looked at whether or not outside factors affect levels of uncertainty and anxiety in intercultural communication. When looking at correlations between the pre-test measures, it appears that there is a slight correlation between parent's education and intercultural anxiety (r = .488, p = .055), but not

uncertainty (r = -.27) or competence (r = .39). While the relationship is not strong, it still demonstrates that parent's education may play a role in whether or not a student exhibits intercultural anxiety. In addition, there was no correlation between age and uncertainty (r = .35), competence (r = -.26) or anxiety (r = -.21). There was also no correlation between prior international experience and uncertainty (r = -.29), competence (r = .22) or anxiety (r = .36).

The correlation between competency and intercultural anxiety levels between time one (r = .714, p = .002) and time two (r = .732, p = .007) was stronger. This is important to keep in mind as the students being tested may have had a moment of clarity, self-reflection, or the questions may have triggered a memory they did not remember during the pre-test.

For example, when giving the post-test survey, one of the participants asked whether or not a few weeks spent outside of the United States could be used as prior experience. This question did not come up from this test-taker during the pre-test, which brings up the possibility that the participant answered differently between time one and time two. These types of recollections, or the potential for a new self-awareness about one's own anxiety and competency in intercultural interactions, may explain why the correlation changed.

In addition to memories being triggered, the way in which questions were asked could have played a factor as well. In the pre-test, intercultural anxiety was measured on a Likert scale. During the post-test, intercultural anxiety was measured by asking the students to fill in a number that corresponded with their feelings during the interaction. Intercultural anxiety measured comfort, which did decrease from time one (M = 3.69, SD)

= .52) to time two (M = 2.74, SD = .47), which could have been a result of the way the question was worded. The results suggest that it was not a good experience in that students felt less comfortable. The sample size between time one (N = 16) and time two (N = 14) was smaller. Having four test-takers drop resulted in losing 20% of the sample size. If those four students had a good experience, the anxiety levels may have changed in a different direction or not changed at all.

#### **Discussion**

#### Limitations

One of the main limitations of this study was the sample size. The tests were conducted in a fall semester intercultural communication course that had 20 registered students. However, since the study was voluntary, there were a few who opted out, and different students participated in pre- and post-surveys. The post-test was administered the same as the pre-test; however it really came down to how many people showed up to class each day. In addition to the small sample size, if one person did not answer honestly, or dropped out, then the results were affected.

Another limitation was time. This study could have the potential to make a larger difference if there was more time to study, such as beginning in the start of the semester and post-testing at the end. In addition, having started sooner could have directly resulted in having a larger sample size. If that was the case, having four students drop between the pre- and post-tests would not have had such a statistical impact on the study. Results could have been much clearer, and more advanced statistical tests could have been used.

#### **Future Research**

In terms of future research, a larger participant pool would be beneficial.

Including participants of all ages would also be interesting to see. The results suggest that college-age students are feeling fairly comfortable. It would be interesting to test if this is a common feeling among all age groups, or to determine if there is a specific age group that feels more anxious or uncertain. It is also important to explore whether a single intervention is enough to change anxiety and uncertainty, or whether a series of interventions may help.

Additionally, including identifying information would also make the research easier. By assigning each participant a number, it would be easier to track any differences each participant reports after the pre- and post-tests. This could help identify specifically what kinds of people exhibit the most anxiety going into an intercultural interaction.

#### Conclusion

In conclusion, it appears that anxiety levels somewhat correlate to competency levels in intercultural communication. However, it was also found that students, particularly millennials in a college setting, are generally open to interacting with those of other cultures. These levels are somewhat a learned behavior, but a single, direct interaction does not appear to have a substantial positive effect on their understanding and competency in intercultural communication.

While society has a way to go before the world communicates with one another in a competent way, these test results show us that there is hope for the future. Young adults are interested in learning more about other cultures, and they are open to hearing what it is another culture has to say, as reported in the findings between the correlation of age

and experience (r = -.58). This negative correlation lets us know that the younger the student, the more experienced or open for experience they are. The most important takeaway from this particular study is that these students already exhibit a somewhat comfortable feel towards communicating with someone who is different than themselves as evidenced by their average scores in measures of anxiety, uncertainty and competence. Although there was no big shift between time one and two, it might not be the pre- and post-tests that we need to study, rather what people expect to happen versus what actually happens. While the results did not offer definitive conclusions about the research questions, it demonstrated that students are already open to intercultural communication.

## Appendix

- I. Anxiety
  - a. Pre-test

Generally, I am comfortable interacting with a group of people from different cultures.
I am tense and nervous while interacting with people from different cultures.
I like to get involved in group discussion with others who are from different cultures.
Engaging in a group discussion with people from different cultures makes me nervous.
I am calm and relaxed with interacting with a group of people who are from different cultures.
While participating in a conversation with a person from a different culture, I get nervous.
I have no fear of speaking up in a conversation with a person from a different culture.
Ordinarily I am very tense and nervous in a conversation with person from a different culture.
Ordinarily I am very calm and relaxed in conversations with a person from a different culture.
While conversing with a person from a different culture, I feel very relaxed.
I am afraid to speak up in conversations with a person from a different culture.
I face the prospect of interacting with people from different cultures with confidence.
My thoughts become confused and jumbled when interacting with people from different cultures.

## b. Post-test

Unea	isy				
Conf	ident				
Tens	е				
Relati	ked				
Appr	ehensive				
Com	posed				
Insec	oure				
Calm	ı				
Oper	1				
Close	ed				
II. Competer  a. Pre-te	est ow about your beha	aviors with interc	ultural communic	ation. Rate you	ır agreement wit
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agre
end to censor myself	0	0	0	0	0
am aware of my words	0	0	0	0	0
eel calm and relaxed	0	0	0	0	0
hink about the other erson's culture	$\circ$	$\circ$	$\circ$	$\circ$	0
enter the conversation thout thought	0	0	0	0	0
am confident in					

## b. Post-test

2. Next we want to know about your behaviors during the intercultural interaction. Rate your agreeance with each statement below:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I censored myself	0	0	0	0	0
I was aware of my words	0	0	0	0	0
I felt calm and relaxed	0	0	0	0	0
I thought about the other person's/people's culture	0	0	0	0	0
I entered the conversation without thought	0	0	0	0	0
I feel confident I communicated effectively	0	0	0	0	0

## III. Uncertainty

## a. Pre-test

## 3. Please rate your level of agreement with each statement:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Most of my friends are from my own ethnic background	0	0	0	0	0
I feel threatened around people from different backgrounds than my own	0	0	0	0	0
I see myself as a global citizen	0	0	0	0	0
I understand how various cultures of this world interact socially	0	0	0	0	0
I consider cultural perspective when evaluating global problems	0	0	0	0	0
I am accepting of others with different cultural values than my own	0	0	0	0	0
I can discuss cultural differences with an informed perspective	0	0	0	0	0

## b. Post-test

4. Please rate each statement as it best applies to your situation after having this interaction:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I can explain my personal values to those that are different than me	0	0	0	0	0
I feel threatened around people from different cultural backgrounds	$\circ$	0	0	0	$\circ$
I see myself as a global citizen	0	0	0	0	0
I understand how various cultures of this world interact socially	0	0	0	0	0
I consider cultural perspective when evaluating global problems	0	0	0	0	0
I am accepting of others with different cultural values than my own	0	0	0	0	0
I can discuss cultural differences with an informed perspective	0	0	0	0	0

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