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# Raising Cultural Awareness in Undergraduate Students through an Online Pen Pal Program

Jenny-lin Smith
*University of Montana*, jenny-lin.smith@umontana.edu

Mackenzie Lombardi
*University of Montana*

Rehana Asmi

Madison Hinrichs

Kayla Robertson

*See next page for additional authors*

## Author

Jenny-lin Smith, Mackenzie Lombardi, Rehana Asmi, Madison Hinrichs, Kayla Robertson, Lindsey Buck, and anna reid

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Rehana E. Asmi, Lindsey M. Buck, Madison R. Hinrichs, Mackenzie J. Lombardi,

Anna G. Reid, Kayla J. Robertson, Jenny-Lin L. Smith

University of Montana

**Abstract**

International written communication networks, such as pen pal programs, help spread cultural awareness by connecting people from around the world. Competent intercultural communication is the foundation for strong global partnerships. It encourages diversity, increases academic achievement, and gives individuals a competitive edge in the global workforce. This study examines changes in the cultural awareness of 50 U.S. undergraduate participants enrolled in an intercultural communication course at a northwestern university after they exchange private, online pen pal letters with 50 international partners from across the globe. The U.S. participants were divided into Group A (test-group) and Group B (control-group) and then a pretest was administered to both groups to assess their cultural awareness before the letter exchange began. The Group A exchange was conducted over a two-week period, after which the U.S. participants were re-tested. The Group B began their exchange after the second test. The results of the tests were analyzed to determine whether the pen pal program increased cultural awareness in the U.S. undergraduate participants. Although no statistical increase was found, a lot of information and data was collected that future researchers and educators can use to develop their own programs.

**Literature Review**

Although U.S. high schools and universities teach students about different countries, most students never get the opportunity to communicate with individuals from abroad (Luo, J., & Jamieson-Drake, 2013). Because of this, a profound gap in cultural awareness has formed within the U.S. education system (Luo, J., & Jamieson-Drake, 2013). This problem needs to be addressed because society's necessity for cultural awareness is more critical than ever before (Parrish & Linder-VanBerschot, 2010). As modern advances in technology make global partnerships possible, international corporations favor employees who can effectively communicate with people from diverse backgrounds (Parrish & Linder-VanBerschot, 2010). By exposing students to intercultural interactions, universities can raise cultural awareness and give their students a competitive edge in the global job market (Parrish & Linder-VanBerschot, 2010).

One way to gain cultural awareness is through pen pal letter exchanges, which give students the opportunity to correspond with people from around the world and share stories about their lives, cultures, and customs (Gay, 2010). In return, students learn about alternative political and social practices and are presented with beliefs that may differ from their own (Gay, 2010). Although educators who have used pen pal programs to help their students develop language and communication skills have noticed that the programs also raise cultural awareness, little research has been done to measure the extent of this increase (Barksdale, Watson, & Park, 2007; Gay, 2010). This prompts the research question: Can the cultural awareness of undergraduate college students at a public university in Montana be increased by exchanging online letters with international correspondents?

        The following paragraphs describe what cultural awareness is, why it is a necessity for

the global workforce, how undergraduate students can gain cultural awareness from intercultural

communication, the benefits of pen pal programs, how written communication—specifically the

exchange of personal narratives—can spread cultural awareness, and how cultural awareness can

be tested and measured.


**What Is Cultural Awareness?**

        Cultural awareness is the ability to acknowledge and respect the differences between

diverse groups of people, respond to the differences in a positive and considerate manner, and

keep them in mind when communicating with people from a wide range of cultures (Trumbell &

Pacheco, 2005; National Center for Cultural Competence, n.d.). The National Education

Association (n.d.) has identified five "basic cultural competence skill areas": valuing diversity;

being culturally self-aware; understanding where cross-cultural communication can go wrong;

possessing knowledge of the student's own culture; and bringing cultural knowledge into school

organizations. To effectively work within another culture, people must be interested in other

cultures, be sensitive enough to notice cultural differences, and be willing to modify their

behavior as an indication of respect for the people of other cultures, essentially, they need to

develop a sense of cultural awareness (Hammer, 2003).

        For intercultural communication to run smoothly, everyone involved must be comfortable

enough to ask questions without fear of ridicule or degradation (Matthews and Thakkar, 2012).

"Successful cross-cultural communication creates a dialogue, a continuous transfer of

information," that allows each side to ask clarifying questions and provide constructive

responses (Matthews & Thakkar, 2012, p. 343). Therefore, establishing an open line of

communication decreases the possibility of misguided assumptions and cultural

misunderstandings.


**The Global Workforce: Why Cultural Awareness Is A Necessity**

In the era of globalization, corporations must work together to survive, meaning they

must work with people from diverse cultural backgrounds, many of which have conflicting

beliefs and social practices (Parrish & Linder-VanBerschot, 2010). Cultural misunderstandings

can still occur even when both parties involved speak the same language because language is not

the only cultural barrier that needs to be worked around. As a result, individuals with a basic

comprehension of other cultures have a competitive advantage in the global workplace

(Matthews & Thakkar, 2012).

One example of this is the differences between individualist and collectivist cultures.

Western cultures, like those in the United States and Western Europe, emphasize individualism,

a belief system in which individuals are encouraged to pursue their own interests even if they do

not benefit the entire group (Parrish & Linder-VanBerschot, 2010; Triandis, 2001). In contrast,

Eastern cultures, like those in Asia, Africa, India, and the Middle East, prioritize collectivism, a

belief system in which the needs of the group take priority over the needs of individuals (Parrish

& Linder-VanBerschot, 2010; Triandis, 2001). In an individualist classroom, students might be

encouraged to speak their own opinions, while in a collectivist classroom, students are expected

to adopt the teacher's perspective rather than developing their own (Parrish & Linder-

VanBerschot, 2010). Even though the example given by Parrish and Linder-VanBerschot is in an

academic setting, a similar scenario could easily play out in an office space. In an individualist culture, employees would have freedom to work independently, develop their own ideas, and pursue their own projects. In a collectivist culture, though, employees would focus on their contribution to the company as a whole, rather than their individual positions and their jobs would overlap with one another more often, creating a group mentality.

If an individual in the global workplace is unfamiliar with cultural differences, like the differences between individualist and collectivist cultures, damaging tension may form within their international partnerships (Parrish & Linder-VanBerschot, 2010). These complications occur frequently when people from two cultures are asked to work together because one party does not understand the cultural position of the other (Parrish & Linder-VanBerschot, 2010). Corporations and other institutions now recognize that they must be more aware of differing cultural values to conduct business effectively (Parrish & Linder-VanBerschot, 2010). This is why people with a sense of cultural awareness have a competitive advantage over those that do not (Matthews & Thakkar, 2012).

**Gaining Cultural Awareness Through Intercultural Communication**

Some American university students have the opportunity to develop cultural awareness through interactions with the international students attending their schools. Approximately 819,600 international students studied at colleges and universities in the U.S. in the 2012-2013 academic year (DeSilver, 2013). However, 22 to 25 percent of U.S. students surveyed at four universities indicated having little, if any, international interaction (Luo, & Jamieson-Drake, 2013). After these undergraduates participated in a peer-pairing program, they scored higher in

their ability to relate well to people of different races, nations, or religions and increased their cultural awareness and their intellectual and moral reasoning (Luo, & Jamieson-Drake, 2013). These students also showed a greater openness to different perspectives and a willingness to challenge their own beliefs (Luo, & Jamieson-Drake, 2013).

Cultural awareness has become a critical component of global relations (Luo, & Jamieson-Drake, 2013). Luo, and Jamieson-Drake (2013) suggest that an increased awareness of language usage and the development of friendships might "serve as a valuable source of social, cultural, political, and economic knowledge when US students enter the workforce" (p. 3). Business professionals who possess a sense of cultural awareness and adaptability find it easier to communicate with colleagues and clients from different parts of the world and are in high demand in the workplace (Parrish & Linder-VanBerschot, 2010).

**The Benefits of Previous Programs**

Educators use pen pal letter exchanges to teach cultural awareness and global competency for multiple reasons: they allow students to communicate with people other than their teachers, they foster the development of global tolerance and cultural sensitivity (which are essential to cultural awareness), they are quick and easy thanks to modern technology, and they offer an appropriate platform for students to engage in recontextualization (Phillips & Crespo, 2008; Soh & Soon, 1991; Cononelos & Oliva, 1993; Cameron, Hunt, & Linton, 1996; Barksdale, Watson, & Park, 2007).

Phillips and Crespo's study (2008) highlights many of the benefits of pen pal programs. First, pen pal letter exchanges allow students to communicate with an audience other than their teachers and classmates, an opportunity they do not get from most academic programs (Phillips

& Crespo, 2008). This opportunity is attractive to students, as Phillips and Crespo (2008) discovered that they write with more depth and clarity when their work is directed toward a peer, rather than a teacher. Students in the study were also willing to pursue an idea, task, question, or problem over several letter exchanges, which requires them to think about a topic over a longer period of time and helps them develop their cognitive operations (Phillips & Crespo, 2008). Overall, pen pal letter exchanges enhance a student's disposition and enthusiasm toward their school work (Phillips and Crespo, 2008).

By connecting people from across the globe, pen pal letter exchanges promote global tolerance and understanding and foster the development of cultural awareness. Soh and Soon (1991) researched these effects of intercultural communication in their study by connecting college students in Singapore and Quebec. Through computers and fax machines that Soh and Soon (1991) provided, the students exchanged ideas and stories about their hometowns and traditions. In the process of analyzing each other's letters and discussing them together, they developed their language and computer skills, increased their global knowledge and, ultimately, raised their cultural awareness (Soh & Soon, 1991).

Cononelos and Oliva's study (1993) also utilized technology by connecting college students from the U.S. online with students from Italy. The Italian students taught their American counterparts about Italy's politics and government (Cononelos & Oliva, 1993). This helped the American students develop an in-depth understanding of the Italian language and culture, in both writing and reading, and inspired enthusiasm and confidence amongst the students (Cononelos & Oliva, 1993). Both Cononelos and Oliva and Soh and Soon saw the potential for modern technology to be used as a correspondence tool to educate their students and raise cultural

awareness.

More importantly, pen pal letter exchanges help students transfer what they learn in the classroom to the outside world through a process called recontextualization (Phillips & Crespo, 2008). Recontextualization is when students read a text, engage with the content of the text in a different context (usually experiential) and then return to the text and respond to it in writing (Cameron, Hunt, & Linton, 1996). For example, biology students might read about onion cells, examine and experiment with the cells in a laboratory, and then write a lab report that incorporates both the textual and experiential knowledge. The writing portion of recontextualization sharpens students' overall understanding of the topic, because it requires them to think through different concepts and formulate their own ideas and opinions (Phillips & Crespo, 1996).

Barksdale, Watson, and Park's (2007) study demonstrates how pen pal letter writing offers a practical method to engage in recontextualization. Through sharing stories and corresponding with other cultures, students learn to recontextualize cultural literacy (Barksdale, Watson, & Park, 2007). Barksdale, Watson, and Park (2007) analyzed a pen-pal exchange between American university students and Malawian university students. They identified three central themes in the content of the letters sent back and forth: daily life and culture, language, and connections (Barksdale, Watson, & Park, 2007). The authors saw improvements in the students' writing and English skills (Barksdale, Watson, & Park, 2007). The study notes that U.S. students acquired a profound sense of cultural awareness and advanced communication skills; the Malawian students developed their English writing skills (Barksdale, Watson, & Park, 2007). The results showed how valuable the pen pal program was to supporting literacy

development and cultural understanding in both groups (Barksdale, Watson, & Park, 2007). The

study found that students benefit more from a curriculum-based intercultural communication

program in the classroom than from an independent research project on a particular country or

people group (Barksdale, Watson, & Park, 2007).

**Written Communication: The Sharing of Personal Narratives**

Rather than relying on textbooks that may portray unbalanced or biased coverage of

different groups, pen pal letter writing allows students to study other cultures through sharing

personal narratives (Gay, 2013). Adding an element of storytelling to promote cultural awareness

helps students to mentally solidify the more abstract areas of culture, such as the influence of

gender roles or cultural religions, and to differentiate between falsified or inaccurate information

and the truth (Gay, 2010).

In an era where people can post whatever they want on the internet, whether it be true or

false, students have to worry about their accessibility to accurate information and be wary of how

other cultures are represented online and in the media (Gay, 2013). Sharing personal narratives

helps to "counteract the negative discriminations and distortions" (Gay, 2013, 49) of these

cultures, by offering students a direct information source, and although pen pals can lie, why

would they when they are writing to someone they will never meet? (Gay, 2013). Because of

this, the sharing of personal narratives works to invalidate inaccurate stereotypes—produced by

online forums, chatrooms, and social media postings—that students may have previously

accepted as common knowledge (Gay, 2013). Students are more likely to become interested in

learning about new cultures and be able to understand the basis for another person's perspective

when they are placed within a narrative, rather than a data set of facts (Gay, 2010). By reading an

autobiographical account of someone's life, students can acquire a basic understanding of that person's cultural context, and develop a level of empathy for them (Gay, 2010). These "feelings of affinity" brought forth by a personal narrative, would never develop if the reader only studied statistical data about the culture (Gay, 2010).

Despite the existing evidence that sharing personal narratives with someone from another culture can raise an individual's cultural awareness, pen pal letter exchanges have yet to be tested in a university-level intercultural communications class. The purpose of this study was to begin filling this gap in research by testing a letter exchange program designed for both online and the face-to-face intercultural communications classes at a public university in Montana.

## Methods

The Franke GLI capstone team conducted an international letter exchange in two intercultural communication classes at a public university in Montana by building a letter exchange program from the ground up. Their goal was to further and add to the existing research on international letter exchanges. The first section of the Methods titled 'Participants' explains who participated in our program and why. The second section titled 'Procedure' gives a quick overview of the letter writing process and the stages that lead up to it. The three sections that follow go into detail on how the capstone team developed surveys, Moodle shells, and letter writing prompts to facilitate this experiment.

### Participants

Fifty U.S. participants in undergraduate intercultural communication courses—twenty-

five from an online class and twenty-five from a face to face class—at the university all participated in the letter exchange as a part of their assigned course material. Participants received course credit from their professor for participating in the experiment.

Fifty international partners were recruited from the University of Nairobi in Kenya and the researchers' personal contacts from around the globe, including: Brazil, Japan, China, South Korea, Vietnam, Sri Lanka, and Russia. This ensured that the U.S. participants were exposed to a broad range of cultures. The international partners are not associated with one another or a common organization, and they did not receive any academic credit for participating in our program.

**Procedure**

Before interacting with participants, members of our research team obtained approval from the university's Institutional Review Board (IRB).

U.S. participants from both the online and the face-to-face intercultural communications classes were mixed together and then randomly divided into two groups: Group A served as the dependent variable group and Group B served as the control group.

Before beginning the experiment, the intercultural communications professor distributed a handout to the U.S. participants that told them that "The purpose of this experiment is to determine whether or not Moodle is a suitable learning management system for university courses that want to correspond with people from other institutions." This handout also gave the U.S. participants instructions to begin the program.

U.S. participants began by completing a pretest survey (see Appendix A); international

partners were not tested. The capstone team distributed the survey through the Qualtrics online

survey platform. The U.S. participants accessed the survey from either a link sent to their

individual email addresses or from a link posted on both Group A's and Group B's Moodle

shells. At the end of the survey, Group A participants were redirected to the Moodle shell where

there were directions on how to post the first letter assignments and Group B participants were

given a 'Thank you' message.

Group A participated in the program first. These participants were assigned one letter per

week throughout the two-week duration of the letter exchange. After Group A finished their

letter writing, all U.S. participants took the posttest (see Appendix B), via Qualtrics, to measure

the effects of the letter exchange. Then Group B started their two weeks of international

correspondence.

**Pretest and Posttest Surveys**

To detect whether there was a statistical change in U.S. participants' cultural awareness

level, the capstone team measured the effects and success of the letter exchange program through

a forty-seven-question pretest survey and a fifty-question posttest survey. The survey questions

were partially derived from Cushner's Inventory of Cross-Cultural Sensitivity (ICCS). The ICCS

is a thirty-two-question survey that is scored with seven point likert-type scales of agreement.

The rest of the questions were developed by the capstone team, with the assistance of the

intercultural communications professor. Mahon and Cushner (2014) first developed the

Inventory of Cross Cultural Sensitivity (ICCS) in 1992 but the capstone team chose to use their

2014 revised ICCS.  The questions were designed to measure increases and decreases in cultural

sensitivity (Mahon & Cushner, 2014). Participants respond to statements, such as: "Having

knowledge about other cultures and interacting successfully with them is vital to the United

States' survival in the world" or "It is a good idea that people live in communities that are mostly

their own cultural group, rather than lots of different people living together because there is too

much potential for conflict or problems" (Mahon & Cushner, 2014). The ICCS also includes

questions about cultural inclusion, such as "I would like to live in a different culture in the

future" and "It makes me nervous to talk to people who are different from me" (Mahon &

Cushner). Cushner separates these scores into five sub-scales of cross-cultural sensitivity:

cultural integration, behavioral, intellectual interaction, attitude toward others, and empathy. All

the ICCS questions are designed to measure an individual's level of cultural awareness, at the

time the test is taken (Mahon & Cushner, 2014).

The pretest survey consisted of four main parts: (1) introduction and consent agreement,

(2) evaluation of the Moodle platform, (3) the ICCS, and (4) demographics. The first questions

asked participants to identify themselves by their university-issued ID numbers. Student

responses remained confidential throughout, however it was necessary to collect their ID

numbers to match pretest and posttest responses. Next, the participants were asked to agree to

consent language, as dictated by IRB. In the second section of the survey, participants who

indicated that they had used Moodle before answered one frequency question and six likert-type

scales of agreement, on their experiences with the platform. This information is tangential to our

research question and was included to corroborate the cover story provided to participants at the

start of the study. In the third section, participants responded to the thirty-two questions of the

ICCS. Questions were randomized but remained in the same order for each respondent of the

pretest and the posttest respectively. Several questions called for reverse coding and data was

changed accordingly. Finally, participants were asked a series of demographic questions

including gender, age, number of years at the Montana university, ethnicity, country of origin,

and travel outside of the U.S. All responses were optional, and participants were unable to move

backward and change answers in the survey.

The posttest repeated sections one, two, and three of the pretest. The ICCS questions

were presented in a different randomized order than the pretest, although the order was constant

for all respondents. Questions that required reverse coding were adjusted as such. The

respondents who had already participated in their international exchange were asked a series of

open-ended questions about their experience in the program.

Once the surveys were completed, the capstone team collected the data and entered it in

an excel format. The unit of analysis is the number given on the 1-7 scale by the respondents.

Questions resulting in a 7, or strongly agree, correlate with high cultural awareness while

questions resulting in 1 results in low cultural awareness. Seventeen of the questions called for

reverse coding and data was changed as such. The capstone team also calculated scores for the

entire ICCS and for each of the subscales for each respondent, and change across the pretest and

the posttest tracked. After the results were entered by the capstone team, they used a

mathematical software called STATA to interpret and analyze the results and found the means,

standard deviations, p values, and t statistics, which were then used to determine if the

communication was statistically significant to fostering cultural awareness.

The capstone team hypothesized that there would be a difference in the mean, median,

maximum, and minimum scores in at least some of the indicated sub-scales, that would indicate

that the program increased U.S. participants' level of cultural awareness.

**Moodle Shells**

Due to time restraints and the success of other researcher's letter exchange programs, the capstone team decided to conduct the pen pal letter exchange online. They selected the Montana university's online learning management system Moodle, to host the communication between the U.S. participants and the international partners.

Moodle is used—for online courses, blended face-to-face courses, online resource guides, and grading—by the majority of professors and groups at the university. Both intercultural communications classes were familiar with Moodle based on their professor's integration of the platform in both her online and face-to-face classes, this contributed to the capstone team's decision to use the platform for the letter exchange.

The capstone team created two non-course-related Moodle shells, one for Group A and one for Group B, where the U.S. participants could access links to pretests and posttests, letter-writing guidelines and prompts, and submit their letter assignments. Group A participants uploaded their first letters to the Moodle shell. The international partners were not given access to the Moodle shell because they do not belong to a single institution. Instead, the capstone team copy-and-pasted each letter from the U.S. participants into a capstone team email address and sent them individually to the international partners. The capstone team monitored the international partner's participation through this email address. When the international partners responded, the capstone team copy-and-pasted the response letters from the emails into Moodle, where the U.S. participants could access them. After reviewing their response and the prompt for

the next assignment, U.S. participants submitted their second letter. This process was repeated for each letter and both groups.

By using Moodle, the capstone team ensured privacy, as well as safe and reliable communication, contingent only on the engagement and participation level of the U.S. participants and international partners.

**Letter Writing Guidelines and Prompts**

To alleviate possible tension caused by a lack of cultural awareness among the U.S. participants and the international partners, the U.S. participants were given the following letter-writing-guidelines. In addition to this, letters 1 and 2 for both Group A and Group B were assigned a writing prompt, which were posted onto the Moodle shells. These prompts were designed by the professor and the Franke GLI capstone team to create stimulating conversation between the two pen pals, to help them introduce themselves and get to know one another and to share specific details about their cultures. By giving the U.S. participants prompts to follow, the capstone team hoped to direct conversation away from meaningless or troublesome content, and towards topics that contribute to cultural awareness (as seen in the prompts).

Letter Writing Guidelines:

1. Respond to each letter with an open mind and be sensitive to your partner's culture and customs.
2. Respond to the letters you receive in your own words, but keep in mind that your partner's writing skills may not match your own.

3. Feel free to voice your honest opinions and perspectives of your own culture
   and that of your partner.

4. Don't be afraid to ask specific questions of your partner, the Franke GLI
   capstone team (at internationalletterexchange@gmail.com), or your
   professor.

Letter 1 Prompt:

Introduce yourself, including your name, area of study, hometown and any
other basic information you wish to include. Then respond to the following
prompt: Members of individualistic cultures tend to emphasize the individual
over group identity rights and needs. Self-sufficiency, personal
responsibility, and autonomy are promoted in this culture. Collectivist
cultures emphasize the importance of "we" over "I" identity, group over
individual wants and desires. Relational interdependence, inter-group
harmony, and collaborative spirit are promoted in this culture. Would you
identify yourself as more individualistic or collectivistic? Can you identify a
cultural clash that you have experienced based on differences in
individualistic and collectivistic values? In addition to responding to the
prompt, please pose a question of interest to your partner.

Letter 2 Prompt:

- Choose one of the following questions to begin a discussion on some of your

cultural norms for nonverbal communication:

- ○ When you encounter a person speaking very loudly and at a fast rate, what interpretations do you make? What are your interpretations of a person speaking very softly and slowly?

- ○ What hand gestures do you use to communicate certain messages (e.g. goodbye, hello, it's okay, I'm tired, etc.).

- ○ How do you communicate encouragement, interest, anger, and other emotions through touch?

- ○ Describe one particular item that you wear.  What does it say about you? Is there meaning behind this item?

- In addition, please pose a question of interest to your partner.

## Results

The capstone team has divided the experiment results into three sections: 'Quantitative Results' explains the statistical results derived from the pre-and-posttest surveys; 'Qualitative Results' explains the responses to both the open-ended survey questions and the focus groups; and 'Moving Forward' explains how this experiment can be improved for future use and where it is going next.

**Quantitative Results**

The ICCS was administered to U.S. participants before and after the intervention period

through the pre-and-posttest surveys. Below are the results from tests administered on the ICCS

## Table 1: Summary Statistics for Pre Test

| Scale | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|
| CSCALE | 39.31579 | 9.989468 | 20 | 65 |
| ASCALE | 26.73684 | 5.519911 | 11 | 35 |
| BSCALE | 29.91667 | 2.687272 | 24 | 34 |
| ISCALE | 31.86842 | 5.408557 | 16 | 42 |
| ESCALE | 24.51351 | 3.185223 | 18 | 31 |
| | | | | |
| TOTALSCORE | 154.0857 | 19.19769 | 122 | 202 |

questions.

Table 1 shows the summary statistics for the pretest. Out of a total score of 70, the

highest score in the C-Scale that measures cultural integration was 65 and the mean score was

39.32. The A-Scale measures attitude towards others and the highest score out of 35 was a

perfect 35, with the mean being a 26.74. The B-Scale measures behaviors towards others and had

a high score of 34 out of 42 with a mean of 29.92. The I-Scale measures intellectual interaction

with people of other cultures and received a high score of 42 out of 42 with a mean of 31.87.

Lastly, the E-Scale measures empathy towards others and received a high score of 31 out of 35

and a mean score of 24.51. Overall, the total amount that any participant can score is 224 after

adding up all of the scales. The highest score any participant got was 202 and the lowest was

122, with a mean of 154.09. The standard deviations in this table are relatively high, reflecting

that participants with a variety of different opinions and cultural awareness levels were part of

the sample group.

**Table 2: Summary Results for Post Test**

| Scale | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|
| CSCALE | 41.6383 | 10.64124 | 19 | 59 |
| ASCALE | 27.8125 | 6.163227 | 13 | 35 |
| BSCALE | 28.97872 | 5.399232 | 16 | 39 |
| ISCALE | 31.45652 | 4.847481 | 17 | 42 |
| ESCALE | 25.2766 | 3.976573 | 15 | 32 |
| | | | | |
| TOTALSCORE | 156 | 25.40254 | 102 | 193 |

Table 2 reflects the results of the posttest analysis. The scales are measured in the same units as above. The capstone team can see that the means of each group reflect a higher score, except for that of B-Scale and the I-Scale. A paired t-test was run on a sample size of 34 participants who took both the pretest and posttest. This was used to determine whether there was a statistically significant mean difference between the pretest results and the posttest results. Paired t-tests were run on the C scale, A scale, B scale, I scale, and E scale of each group. Paired t-tests were also run on the total score. No statistical significance was found in any of the categories. The capstone team was particularly interested in the C scale and the total score. The p-value for the C scale was .847 and the p-value for the total score was .645. Neither resulted in statistical significance, meaning that there was not a statistical increase in the U.S. participant's level of cultural awareness.

**Qualitative Results**

In the surveys, the capstone team included several open-ended questions, in hopes that the responses could help guide future pen-pal programs. When asked what their favorite part of

the program was, respondents almost unanimously cited the opportunity to share their own culture and learn about another culture. Respondents used the word "similar" quite frequently underscoring the effectiveness of this program at illuminating connections between cultures.

The respondents' least favorite parts of the program varied more, however, several cited structural flaws such as their inability to message their partners directly, the timeliness in which their partner responded, and the short timeline of the assigned letters. Several respondents also expressed disappointment at not receiving responses from their partners. These responses were later reflected in person, during the experiment's follow-up focus groups.

On Wednesday, April 19, 2017, one of the capstone team members hosted two focus groups, with U.S. participants of the letter exchange from the intercultural communications professor's face-to-face class. Two U.S. participants who received responses from their pen pals and two who did not receive responses agreed to provide the capstone team with some feedback.

The U.S. participants were first asked to reflect on their favorite and least favorite aspects of participating in the international letter exchange. The most common favorite was the prospect of meeting someone new, as they were eager to learn about a new culture from someone who has experienced it first-hand. One participant said that she would like to sit down with her international partner, get to know her personally, and be her friend. The same participant, who believed the body of her letter was limited to 500 words (it was a minimum requirement, not a maximum), wanted the word count to be higher so she could communicate more information to her partner. However, U.S. participants who did not receive letters from their partners thought that the 500-word minimum was too great, and ought to be less, suggesting that it is especially difficult to write to a stranger who does not respond to the initial letter. In general, the U.S.

participants enjoyed the process of writing and receiving letters. The two participants who had

not yet received responses from their international partner said that they were going to go check

their e-mails after the focus group to see if they had any responses. However, all of the

participants reported that they experienced some anxiety waiting for the letters. U.S. participants

said it was difficult to prepare their second letter when they were still waiting for a response to

their first letter. Overall, however, the process was enjoyable and participants seemed invested in

the connections (or potential connections) they made with their international partners. The U.S.

participants who received responses said they want to stay in contact with their international

partners, if their partners also want to continue communication. Even the U.S. participants who

did not receive responses commented that they would be willing to have future contact.

When asked to comment on areas of improvement, participants primarily addressed

timing and the prompts. Participants thought their anxiety might be reduced by having more

consistency and better letter prompts. The two participants who did not receive responses from

their international partner said that the program should extend throughout the semester and the

prompts should better align with the subject topics throughout the weeks. The prompts were

vague and difficult to address, especially if the participant was unsure of his or her audience.

After analyzing these responses, the capstone team identified the overall benefit of the

international letter exchange as a means of engaging participants in learning. U.S. participants

showed great enthusiasm to be a part of the program, and enjoyed the letter assignments as a way

to apply the skills they learned in class. The capstone team believes it's important for participants

to enjoy and engage in their education, and the program provides a means to develop better

retention. The professor said that she appreciated how the program provided U.S. participants the

opportunity to apply a real-world application to their studies and the chance to increase their

cultural awareness.

**Moving Forward**

      For future use, the capstone team has identified two key modifications to improve the

international letter exchange program. First, the capstone team believes that the professor of the

class needs access to the Moodle shell. The professor believes that this would give her more

credibility, more authority to monitor assignment expectations, and allow her to answer her

student's questions more directly. Also, the capstone team would add all participants to the

Moodle shell, including the international partners. The program would be on one platform, and

eliminate the need for an email account to be a mediator between the two. The other main

modification would be to partner with an international class instead of individuals. The U.S.

participants and the international partners would all be held to greater accountability to complete

the letter assignments then, as their individual actions would affect each other's work. Each

person would have the same expectations for letter length and content, and the assignments

would be more consistent and timely. Future researchers can keep these suggested alterations in

mind when designing further studies.

      Despite its shortcomings, the professor plans to modify and integrate the international

letter exchange program into her curriculum for the 2017-2018 academic year. The capstone

team is happy to say that the international letter exchange will continue to be used in the future,

and is a model which educators from other institutions can adapt into their own courses and use

as a supplement to coursework material, offering a rich opportunity for students all over to

engage and apply their education in a practical way, and develop their cultural awareness.

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# Appendix A

**Pretest**

**Thank you for choosing to participate in our international pen pal program! We are a team of student researchers who are interested in how a learning management system may be used to facilitate pen pal relationships. Your participation will help us further this research.**

790 # Please enter your 790 number to begin:

Q61 Please select your age:
❍ 18 years of age or older (1)
❍ Under 18 years of age (2)
Condition: Under 18 years of age Is Selected. Skip To: End of Block.

**You are invited to participate the research project: Testing an International Online Pen Pal Program.**

**This online survey should take about 30 minutes to complete. Participation is voluntary, and responses will be kept anonymous to the degree permitted by the technology being used.**

**You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with the university. If you choose not to participate, you will be given an alternate, equivalent assignment to complete that will enable you to achieve the same learning objective for COMX 212. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.**

**If you have any questions about the research, please contact the Principal Investigator or Faculty Supervisor. If you have any questions regarding your rights as a research subject, contact the university's Institutional Review Board (IRB). Please print or save a copy of this page for your records.**

Consent Agree I have read the above information and agree to participate in this research project.
❍ Enter Survey (1)

Q70 Have you used Moodle before you enrolled in this course?
❍ Yes (1)
❍ No (2)
Condition: No Is Selected. Skip To: End of Block.

Q80 The following pages contain questions about your experiences using Moodle, which is the university's learning management system. Answer the questions as honestly as possible. There is no right or wrong answer.

Q74 Not including this course, how may other courses have you taken at the university that required you to use Moodle (including courses you're taking this semester)?

❍   0 (1)
❍   1-3 (2)
❍   4-6 (3)
❍   7 or more (4)

**[The Following questions follow a seven-point Likert scale.]**

Q82 Moodle is easy to use.
Q84 Moodle is easy to navigate.
Q86 I find it easy to submit assignments on Moodle.
Q88 It is easy to check my grades on Moodle.
Q90 It is easy to communicate with my instructor on Moodle.
Q92 Moodle is a safe way to communicate with others.

**Next we'll ask several questions about your intercultural experiences. Answer the questions as honestly as possible. There is no right or wrong answer.**

Q1.29 I read more national news than international news in the daily newspaper.
Q1.31 When something newsworthy happens I seek out someone from that part of the world to discuss the issue with.

Q1.28 The more I know about people, the more I dislike them.
Q1.8 It is better that people from other cultures avoid one another.
Q1.18 I decorate my home or room with artifacts from other countries.
Q1.22 I have many friends.
Q1.19 I feel uncomfortable when in a crowd of people.
Q1.24 I think about living within another culture in the future.
Q1.27 There should be tighter controls on the number of immigrants allowed into my country.
Q1.21 Residential neighborhoods should be culturally separated.
Q1.12 I have foreigners over to my home on a regular basis.
Q1.30 Crowds of foreigners frighten me.
Q1.20 The very existence of humanity depends upon our knowledge about other people.
Q1.17 I listen to music from another culture on a regular basis.
Q1.14 I enjoy studying about people from other cultures.
Q1.32 I eat ethnic foods at least twice a week.
Q1.3 I enjoy being with people from other cultures.
Q1.5 Others' feelings rarely influence decisions I make.
Q1.15 People from other cultures do things differently because they do not know any other way.
Q1.4 Foreign influence in our country threatens our national identity.
Q1.10 I think people are basically alike.
Q1.13 It makes me nervous to talk about people who are different than me.
Q1.23 I dislike eating foods from other cultures.
Q1.7 I avoid people who are different from me.
Q1.16 There is usually more than one good way to get things done.
Q1.6 I cannot eat with chopsticks.
Q1.11 I have never lived outside of my own culture for any great length of time.
Q1.9 Culturally mixed marriages are wrong.
Q1.26 I like to discuss issues with people from other cultures.
Q1.1 I speak only one language.
Q1.2 The way other people express themselves is very interesting to me.
Q1.25 Moving into another culture would be easy.

**Finally, we'll ask you to tell us about yourself.**

D1 Please identify your gender
❍   Male (1)
❍   Female (2)
❍   Other/Choose not to identify (3)

D2 Please select your age
- ❍   Under 18 (1)
- ❍   18 - 24 (2)
- ❍   25 - 34 (3)
- ❍   35 - 44 (4)
- ❍   45 - 54 (5)
- ❍   55 or older (6)

D3 How many years have you attended the university?
- ❍   Less than one year (1)
- ❍   1 year (2)
- ❍   2 years (3)
- ❍   3 years (4)
- ❍   4 years (5)
- ❍   More than 4 years (6)

D4 Please select your ethnicity
- ❍   White (1)
- ❍   Black or African American (2)
- ❍   American Indian or Alaska Native (3)
- ❍   Asian (4)
- ❍   Native Hawaiian or Pacific Islander (5)
- ❍   Other (6)
- ❍   Prefer not to respond (7)

D5 Please select your country of origin

D6 Have you traveled outside of the USA for longer than two weeks?
- ❍   Yes (1)
- ❍   No (2)

Display This Question:
If Have you traveled outside of the USA for longer than two weeks? Yes Is Selected

D7 Please briefly describe the location and duration of your experience(s) abroad:

Display This Question:
Please enter your 790 number to begin:

**Survey Thank you for completing the survey. We appreciate your participation. You are now finished and may continue to your first letter assignment which is due on March 16, 2017.**

**End Thank you for completing the survey. We appreciate your participation. You are now finished and may exit the survey.**

## Appendix B

**Post-Test**

Q64 Please enter your 790 number to begin:

**We hope you have enjoyed participating in this program. In this final survey, we'll begin by asking you a few questions about using Moodle to write your pen pal. Answer the questions as honestly as possible. There is no right or wrong answer. Your responses are confidential. Your teacher will not know how you, personally, answered the questions.**

## [The Following questions follow a seven-point Likert scale.]

Q83 Moodle is easy to use.
Q85 Moodle is easy to navigate.
Q87 It is easy to submit assignments on Moodle.
Q89 It is easy to check my grades on Moodle.
Q91 It is easy to communicate with my instructor on Moodle.
Q95 Moodle is a safe way to communicate with others.
Q97 My professor should continue using Moodle for pen pal letters.
Q87 What improvements could your professor make to Moodle to make the pen pal program run more smoothly?

**Next we'll ask several questions about your intercultural experiences. Answer the questions as honestly as possible. There is no right or wrong answer.**

Q1.24 I think about living within another culture in the future.
Q1.31 When something newsworthy happens I seek out someone from that part of the world to discuss the issue with.
Q1.8 It is better that people from other cultures avoid one another.
Q1.32 I eat ethnic foods at least twice a week.
Q1.29 I read more national news than international news in the daily newspaper.
Q1.6 I cannot eat with chopsticks.
Q1.11 I have never lived outside of my own culture for any great length of time.
Q1.26 I like to discuss issues with people from other cultures.
Q1.16 There is usually more than one good way to get things done.
Q1.20 The very existence of humanity depends upon our knowledge about other people.
Q1.2 The way other people express themselves is very interesting to me.
Q1.1 I speak only one language.
Q1.14 I enjoy studying about people from other cultures.
Q1.12 I have foreigners over to my home on a regular basis.
Q1.9 Culturally mixed marriages are wrong.
Q1.7 I avoid people who are different from me.
Q1.23 I dislike eating foods from other cultures.
Q1.10 I think people are basically alike.
Q1.25 Moving into another culture would be easy.
Q1.21 Residential neighborhoods should be culturally separated.

Q1.13 It makes me nervous to talk about people who are different than me.

Q1.19 I feel uncomfortable when in a crowd of people.

Q1.17 I listen to music from another culture on a regular basis.

Q1.28 The more I know about people, the more I dislike them.

Q1.22 I have many friends.

Q1.18 I decorate my home or room with artifacts from other countries.

Q1.5 Others' feelings rarely influence decisions I make.

Q1.3 I enjoy being with people from other cultures.

Q1.4 Foreign influence in our country threatens our national identity.

Q1.30 Crowds of foreigners frighten me.

Q1.27 There should be tighter controls on the number of immigrants allowed into my country.

Q1.15 People from other cultures do things differently because they do not know any other way.

Q59 Have you exchanged letters with a pen pal yet?

❍   Yes (1)

❍   No (2)

Condition: No Is Selected. Skip To: End of Block.

**Please respond to the following questions in your own words about your experience in the pen pal program.**

Q92 How many letters did you send to your pen pal?

Q93 How many letters did you receive from your pen pal?

Q2.1 What was your favorite part of being a pen pal?

Q2.2 What was your least favorite part of being a pen pal?

Q2.3 The pen pal program was useful to my education. [Likert scale]

Q65 What was the most useful or least useful part of the pen pal program?

Q2.4 I plan to stay in touch with my pen pal. [Likert scale]

Q66 Please elaborate: what kind of contact would you like to have with your pen pal in the future?

Q2.5 Is there anything else you'd like to share?

Display This Question:

If Please enter your 790 number to begin:

**Thank you for completing the survey. We appreciate your participation. You are now finished and may continue to your first letter assignment which is due on April 6, 2017. Please go to the Pen Pal Moodle Page to view the prompt and submit your letter.**

**Thank you for completing the survey! We appreciate your participation in the pen pal program. You are now finished and may exit the survey.**