A Cross-Cultural Comparison of the Relationship between Emotional Intelligence and Academic Performance

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Abstract

Academic achievement in the United States, as measured by international assessments, consistently falls below the achievement of other countries. For example, on the 2012 Program for International Student Assessment (PISA), the United States ranked 36th in the world on math and reading assessments while Japan ranked in the top 10 on the same assessments. In the United States, recent research has linked children's social and emotional skills with increased academic achievement (e.g., Payton et al., 2008). However, this relationship has never been studied cross-culturally. Thus, the current study seeks to explore the association of emotional intelligence and academic performance between children from the United States and Japan. Based on existing research linking higher emotional intelligence with higher academic scores in the United States, I hypothesize that Japanese students will perform better on emotional intelligence assessments.

A Cross-Cultural Comparison of the Relationship between Emotional Intelligence and Academic Performance

Schools in the United States are underperforming when compared to their international peers (Boe and Shin, 2005). Rankings from the 2012 Program for International Student Assessment (PISA)—an international assessment that measures students' reading, math, and science literacy as well as problem solving abilities—indicated that the United States ranked 36th in the world on math and reading assessments (PISA, 2012). By comparison, Japan ranked in the top 10 on the same assessments. This finding was mirrored on a separate international assessment, the Trends in International Mathematics and Science Study (TIMSS), in which Japan also outperformed the United States (Provasnik et al., 2012). By using international samples as a frame of reference, we may better understand educational programming within the United States to develop solutions to close the international achievement gap.

An abundance of research has documented the contribution of children's social and emotional skills to their social and academic success, and a national and international trend has been to address children's social and emotional learning needs as a pathway to boost academic outcomes (Brackett et al., 2012). For example, programs implemented in order to increase social and emotional skills—a broad category that encompasses some of the aspects of the more specific category of emotional intelligence—led to increases in student academic performance of between 11 and 17 percentile points (Payton et al., 2008). Moreover, a meta-analysis of 213 social and emotional learning programs conducted by Durlak and colleagues (2011) demonstrated an 11% gain in academic achievement as a result of programs designed to increase emotional intelligence. This evidence suggests that in the United States, SEL programming likely associates with positive academic outcomes. Based on this research, many researchers and

educational stakeholders view SEL and emotional intelligence as a way to promote quantitative gains in student academic performance. A secondary goal of SEL programming is to close the achievement gap between the United States and its international peers. While this motivation is logical based on research in the United States, there are actually very few explorations of these associations *between* cultures. The current study explores associations between emotional intelligence and academic performance among youth in the United States and Japan, which may help elucidate the international achievement gap and provide evidence for education reform that includes SEL.

Emotional Intelligence Definition

In this paper, the development and measurement of emotional intelligence—defined as the ability to recognize, understand, label, express, and regulate emotions—will be based on the four-branch model of emotional intelligence (Salovey & Mayer, 1989). The four-branch model includes: perception of emotion, use of emotion to facilitate thought, understanding of emotion, and management of emotion to promote emotional and educational growth (Mayer & Salovey, 1997). Many assessments of emotional intelligence are based on this framework, including the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey and Caruso, 2002). The MSCEIT uses both the recognition of facial expressions as well as the choice of effective alternate actions in emotion-laden vignettes to assess emotional intelligence, both of which are commonly used in assessments of emotional intelligence including the present study (Mayer, Salovey and Caruso, 2002).

The definition of the four branches mentioned above is fundamental to understanding how they impact students' academic performance. Perception of emotion is the identification and interpretation of emotion in oneself and others (Salovey & Mayer, 1990), which allows

students to accurately understand and tailor their emotional experience to be conducive to critical thinking, diverse interactions, and other tasks necessary for successful classroom interactions. The use of emotion to facilitate thought is the capacity to understand how emotion guides cognitive processes as well as how to use that ability (Salovey & Mayer, 1990). The extension of cognitive development beyond mere comprehension of class content relies on emotion to foster creative interpretations and discussion. For example, it is not common for a personal revelation to occur during a period of intense anger. Next, the understanding of emotion includes the knowledge of how emotions influence perception, memory, and behavior (Salovey & Mayer, 1990). Emotions can hijack cognitive processes, with emotions rendering students distracted or overconfident. However, emotions such as confidence, curiosity, and engagement can positively affect learning. Without the understanding of the effects of emotion, a student can easily fall victim to their emotions, entering emotional states that hinder academic performance. Finally, regulation of emotion is the awareness and use of effective strategies to manage emotions (Salovey & Mayer, 1990). If students know how to regulate their emotions, they can recognize when they are in ineffective emotional states and work to re-center themselves. These abilities work in tandem to allow students to manage their emotions in a way that can facilitate academic performance.

In contrast to the four-branch model of emotional intelligence discussed above, the trait theory of emotional intelligence emphasizes attention to feelings, clarity of feelings, and mood repair rather than a performance test of emotional ability (Salovey et al., 1995). However, the trait theory of emotional intelligence relies on self-reported measures of emotion, which have been shown to produce inaccuracies. A study by Brackett et al. (2006) showed that performance measures of emotional intelligence were not strongly related, indicating that the "perception of

one's emotional intelligence may not be an accurate indicator of emotional intelligence and that these measures are most likely tapping into different mental processes" (p. 784). This research suggests that the four-branch ability model of emotional intelligence is a more valid model to test for emotional intelligence. Thus, this model will serve as the basis of the proposed research, I'll be incorporating performance-based metrics rather than relying strictly on self-report.

Emotional Intelligence Definition Development in Children

Children begin developing emotional intelligence as early as the first days of life, and growth continues throughout the lifespan (Zeidner et al., 2003). Emotion perception is one of the first skills to emerge in early childhood, and there is a clear sequence for development of this skill (Zeidner et al., 2003). Use of emotion to facilitate thought is limited by a child's ability to understand the causes and time course of emotions (Denham, 1998), thus it develops later during school-aged years. Emotion understanding emerges in parallel with a child's linguistic development, around age two (Zeidner et al., 2003). Emotion regulation also develops along with a child's linguistic abilities. Preverbal emotion regulation strategies include thumb-sucking and gaze aversion (Zeidner et al., 2003), and as children develop linguistically, they increasingly use cognitive rather than purely behavioral strategies (Zeidner et al., 2003).

Certain aspects of the environment, including parenting and peer interactions, have been associated with increases in children's emotional intelligence. For example, participation in family discourse about feelings and causality resulted in young children who were better able to engage in conversations about feelings and causality seven months later (Dunn et al., 1991). In a longitudinal study of children aged three to four, researchers collected ratings of children's emotional regulation and emotion knowledge, with results indicating that children who had higher emotional regulation and emotional knowledge also had higher social competence at ages

three and four as well as later on in kindergarten (Denham et al. 2003). As children transition to formal schooling, the school environment increasingly affects children's emotional development (Zins, 2004).

Emotional Intelligence and Academic Performance

Upon entering formal schooling, emotional intelligence becomes even more important for students and educators. Students spend hours in school every day, and the emotional climate of a school inevitably affects the emotional well being of students and staff. In the pursuit of a healthy and constructive emotional climate that fosters academic performance, emotional intelligence can be an important mediating factor. Many teachers recognize the importance of a well-rounded education and how multiple aspects of children's abilities and functioning impact their academic performance (Brackett & Rivers, 2014). With the emergence of research and theoretical models of social and emotional learning (SEL; Collaborative for Academic Social and Emotional Learning, 2016), efforts to explicitly promote children's SEL as a component of the academic curriculum in school have been increasing (Elias, 1997; Zins et al., 2007). It is this combination of both social, emotional, and academic learning (see Zins et al., 2007) as well as the importance of SEL to academic performance (Payton et al., 2008) that SEL interventions seek to promote.

In their review of 324,303 children in 317 studies of SEL programming in elementary and middle schools, Payton and colleagues (2008) found that SEL programs were effective in both school and after-school settings, across grades K–8, and in diverse racial and ethnic student populations. In all these cases, the programs increased emotional intelligence, positive behavior, and, critically, academic performance. Increases in academic performance due to SEL programming were typically between 11 and 17 percentile points across the three reviews. In

addition, SEL programs were associated with positive social and behavioral outcomes. Taken together, theorists argue that increased academic performance may be both a direct function of emotional intelligence abilities, but also an indirect function of increased social and behavior outcomes (Brackett and Rivers, 2014). Research associating increased academic performance to social and behavioral outcomes (e.g., Payton et al., 2008), as well as research associating increased emotional intelligence and social and behavioral outcomes (e.g., Brackett and Rivers, 2014), bolster this model as a tool for improving academic performance.

The associations between emotional intelligence, social and behavioral outcomes, and importantly, academic performance, promotes the idea that assessing emotional intelligence in children can lead to conclusions about their current and future academic success. However, little work has been done to explore these associations cross-culturally. While there have been a limited number of studies looking at cross-cultural differences in emotional intelligence in adults (e.g., Shipper et al., 2010; Vivian et al., 2010), many do not use the four-branch model of emotional intelligence and none have discussed cross-cultural differences in the context of academic performance. Thus, this study is looking to fill the gap in research related to emotional intelligence, academic performance, and cross-cultural differences between the two.

Cross-Cultural Differences

The current study explores the emotional intelligence and academic performance association between children from the United States and Japan. Japan's educational system has consistently scored higher than the United States on international tests of academic performance (e.g., PISA, 2012), and this disparity seems to indicate that on academic achievement assessments, children from Japan will score higher than children from the United States. By

extension, I hypothesize that Japanese students will also do better on emotional intelligence assessments.

In *How Children Succeed* by Paul Tough, certain activities are shown to nurture character traits and habits that support emotions intelligence and later life success (Tough, 2003). These activities include grit, defined as perseverance and passion in the pursuit of goals and desires, as well as mental contrasting, defined as strategies that use "cognitive elaboration of a desired future with relevant obstacles of the present reality" (Duckworth et al., 2007; Duckworth et al., 2011). These activities are integral in Japanese education, but not the American system, suggesting that the Japanese model of teaching promotes classroom activities that lead to higher levels of emotional intelligence in students.

The organization and teaching style of Japanese classrooms follows a system that would seem to support the development of emotional-intelligence. In *The Teaching Gap*, the authors lay out the practices of the Japanese cultural script of teaching which requires students to practice frustrated failure, group collaboration, debate, etc. (Stigler & Hiebert, 2009). In Japan, work is shared between students and teachers, with students creating new questions or championing new methods. There is less focus on structural content, and teachers lecture and demonstrate with the students, not at them. In contrast to a teacher-focused model, Japanese students learn how to problem-solve independently without content-specific curriculum. This system looks very similar to what Magdalene Lempert and Deborah Ball call "This Kind of Teaching" (TKOT), which, anecdotally, promotes respectful collaboration and emotional management (Green, 2014). With this focus on perseverance and group collaboration, students are using skills that are integral in the development of emotional intelligence. Based on this

anecdotal evidence, it is easy to see how Japanese students would develop skills integral in the development of emotional intelligence.

In contrast, the American model of teaching trains and rewards passive reception and rote memorization (Green, 2014). With the use of worksheets, overhead projectors, and chalkboards, teachers focus students on specific content, rather than encouraging students to actively engage with the personally relevant material (Green, 2014). Overall, it is evident that learning and teaching in the United States focuses more on definitions and structural content, rather than on the rationale of solving a problem. Without the focus on group collaboration, peer interaction, and sustained mental stamina, students are not developing skills that can aide in the development of emotional intelligence (Green, 2014). Moreover, with the disconnect between academic material and the social aspects of education, there are fewer opportunities for educators to integrate emotional intelligence into the curriculum. Overall, the paradigm of education in the United States does not nurture emotional intelligence in the same way the Japanese system appears to.

In the context of cross-cultural research in emotional intelligence, it is also important to mention dialect theory. Based on the work of Ekman (1972) and Izard (1971) as well as Matsumoto (1989), dialect theory argues that emotion is a universal language but that it is easier to judge an emotional expression from your own cultural group versus a foreign group (Elfenbein, 2013). Evidence for this theory comes from the in-group advantage participants experience when judging emotional expressions from their own cultural group versus foreign cultural groups (Elfenbein & Ambady, 2002b). This research founded the basis of a research question looking at the performance of each population when using racially similar and dissimilar stimuli. This question, looking at the possible in-group advantage when using

culturally appropriate stimuli, further delves into the subject of cultural differences in the assessment of emotional intelligence cross-culturally.

The Current Study

The current study measured differences in emotional intelligence cross-culturally in order to better understand how to close the international achievement gap. By using a cross-cultural sample of school-aged children (ages 8-11) from the United States and Japan, we seek to answer the following research questions to better understand the international achievement gap and how the United States can work to remedy international achievement gaps:

1. Is there a cross-cultural difference in academic performance and/or emotional intelligence?

   Hypothesis: Japanese students will score higher on assessments of academic performance. Japanese students will also score higher on assessments of emotional intelligence.

2. Is there a relationship between emotional intelligence and academic performance cross-culturally?

   Hypothesis: Students who score higher on assessments of emotional intelligence will also score higher on academic assessments.

3. Do Japanese students do better recognizing facial expressions and stories with a Japanese name/character? Conversely, do students from the United States do better recognizing facial expressions and stories with a Caucasian name/character?

   Hypothesis: Japanese students will perform better when a Japanese character/facial expression is used, and students from the United States will perform better when a Caucasian character/facial expression is used.

Method

Participants

For the United States sample, participants included 147 children ages 8–11 ($M = 9.30$; $SD = 1.07$). The population was approximately 55.80% male and 44.20% female ($M = 0.44$; $SD = 0.50$). Students were recruited from afterschool centers as well as parochial and private schools located in two moderately-sized East Coast cities and one Midwestern city. The United States population was drawn from private, charter, and religious schools, rather than public schools. Due to the selective nature of these schools, students were most likely above average in their academic performance. Moreover, schools and students were not randomly selected; only schools and children who wanted to participate were included in the sample. Thus, there was a selection-bias in the recruitment of this population.

For the Japanese sample, participants included 159 children ages 8–11 ($M = 9.32$; $SD = 0.88$). The population was approximately 48.40% male and 51.60% female ($M = 0.52$; $SD = 0.50$). Students were recruited from one school in Japan. The school was a university-sponsored school, not a general public school. In the Japanese population, almost all of the children in the school participated; exceptions included students who were absent on the day of data collection and could not be rescheduled.

Procedures

In the United States, children were recruited by reaching out to afterschool centers and schools on the East Coast and in the Midwest. Approximately 20 schools and programs were contacted and three schools and three afterschool programs agreed to participate. In Japan, children were recruited through the singular school that agreed to participate in the research. The school was recruited by a Japanese-based colleague. In both samples, parents were asked to

provide written consent for their child to participate in the study. On the day of the assessment, children were asked by the experimenter or a translator to give verbal assent for their participation in the study, which included explaining the purpose of the experiment as well as what to do if they had questions. If the child agreed, they were also given a form that explained the study. This study was approved by the Yale University Institutional Review Board.

After assenting to participate, the experimenter conducted a simple priming procedure with each participant in order to ensure that the emotional language was as accessible as possible in each child's vocabulary before the start of the assessment. In this simple priming procedure, the experimenter initiated a conversation which consisted of asking the children if "happy" was a positive or negative emotion as well as if "sad" was a positive or negative emotion (similar to Widen & Russell, 2010).

Children then completed an online Qualtrics survey consisting of five subsections. Some children were run individually and some were run in groups; the grouping depended on the number of children tested at the site. Children were first asked (Section 1) about their grade level in school, and they were then presented with five math questions and five reading questions corresponding to their grade-level. Reading questions were presented first, followed by the math questions. This order mirrored the order in which the questions were presented in the original academic assessment. Every student in the same grade received the same reading and math questions in the same order for every trial. In the next section (Section 2), children were presented with a "gate-keeper" question. The purpose of the gate-keeper question was to identify children who were able to perceive the basic emotion of "happy." If they were not able to identify this basic emotion, they were deemed unlikely to be able to identify more complex emotions that followed in subsequent sections. Two American and seven Japanese children were

removed from the sample as to not skew the data, which were only 0.01% and 0.04% of the totals for each sample, respectively.

Each child was then presented with (Section 3) two set of questions about one of two different characters in different emotionally-laden situation or (Section 4) two sets of pictures depicting the facial expressions of the characters. One set of questions included a character with a Caucasian name and the other set of questions included a character with a Japanese name. Similarly, one set of pictures were of Caucasian faces and the other set of pictures were of Japanese faces. Ordering of the two sets within Section 3 and Section 4 was at random to eliminate order bias. To ensure there was no unintended bias in the assessment of each population's emotional intelligence in the present study, stimuli depicting Japanese faces and names were used in equal proportion to stimuli depicting Caucasian names and faces. We assessed whether there was an in-group advantage when using culturally appropriate stimuli.

Finally, each child was presented with (Section 5) the Conflict Management Scale, which was comprised of eight questions about hypothetical social situations with five possible responses ranging from aggressive to collaborative and compromising (Developmental Studies Center, 2000).

Measures

Academic achievement (Section 1). Academic achievement was measured using released questions from the California Standards Tests in English-Language Arts and Math (California Department of Education, 2015). This assessment was used due its inclusion in previous scholarly articles assessing student academic outcomes (Gulek and Demirtas, 2005), as well as its availability online. According to Nunnally (1967), this measure is considered

moderately reliable in my exploratory study for students from the United States (10 items; $\alpha = 0.55$). However, it was less reliable for students from Japan (10 items; $\alpha = 0.47$).

Emotional intelligence (Sections 3, 4, and 5). There are many different assessments used to measure emotional intelligence. However, many assessments exhibit an age ceiling around five years old (e.g., Affect Knowledge Test; Denham, 1986). Additionally, many assessments do not target the four-branch model of emotional intelligence (e.g., Test of Emotional Comprehension; Rocha et al., 2013). Of the limited assessments that do target the four-branch model, the MSCEIT-YV is the most valid; however, the assessment is designed for individuals aged nine to 15 years old, which precluded it from being used in the present study (Rivers et al., 2012).

Despite the shortcomings of the aforementioned assessments in meeting the conceptual demands and age-related demands of the present study, they do lay the foundation of how emotional intelligence was tested in the present study. Both the AKT and the MSCEIT-YV, as well as many other assessment of emotional intelligence, use the following tasks to quantify emotional intelligence: recognition of facial expressions; labeling of characters depicting vignettes of emotionally-laden situations; and selecting emotion terms to suit a cause or consequence (Denham, 1986; Rivers et al., 2012). Thus, the present study used similar tasks to assess emotional intelligence. Unfortunately, there is no one task designed to test all four branches of emotional intelligence as well as the use of emotion to facilitate thought in young children. Thus, three skills of emotional intelligence—perception of emotion, understanding of emotion, and emotion regulation—were assessed using three different tasks.

Understanding of emotion (Section 3). Understanding of emotion was measured using stories of emotions based on those developed by Widen and Russell (2010) and depicted five

basic-level emotions (happy, anger, fear, surprise, disgust, and contempt) and three social emotions (embarrassment, compassion, and shame; Tables 1 and 2). These were the same emotions exhibited in the photographs in Section 4. Based on these stories, children were asked to free label the emotions implied by the stories. This variable will be referred to as the free-labeling variable. There were two sets of stories, one with a Caucasian character and one with an Asian character, and both were presented to every student. According to Nunally (1967), this measure is considered moderately reliable in my exploratory study for students from the United States (14 items; $\alpha = 0.66$) (Nunnally, 1967). It is also moderately reliable for students from Japan (14 items; $\alpha = 0.58$).

Perception of emotion (Section 4). Perception of emotion was measured using black and white photographs of faces depicting happiness, anger, fear, surprise, disgust, contempt, embarrassment, compassion, and shame (Nelson & Russell, 2011). Children were asked to select an emotion term corresponding to the emotion of the facial expression. This variable will be referred to as the face labeling variable. There were two sets of photographs, one set with a Caucasian face and one with an Asian face, both of which depicted the same emotions (listed above). Both sets were shown to every participant. Despite the use of this measure in previous studies, we did not find it to be reliable for students from the United States (10 items; $\alpha = 0.34$) or for students from Japan (10 items; $\alpha = 0.25$) (Nunnally, 1967).

Regulation of emotion (Section 5). The regulation of emotion was measured using the Conflict Management Scale (CMS; Developmental Studies Center, 2000). Despite the fact that conflict management is different from emotion regulation, the ability of students to suggest solutions to interpersonal conflicts that take both parties positions into account, as illustrated on the Conflict Management Scale, demonstrates the intrapersonal ability to regulate one's emotions

in emotion-laden situations. The CMS is comprised of eight questions about hypothetical social situations with five possible responses ranging from aggressive to collaborative and compromising (Developmental Studies Center, 2000). This measure is reliable for students from the United States (8 items; $\alpha = 0.73$). It is also reliable for students from Japan (8 items; $\alpha = 0.70$).

Scoring. ***Perception of Emotion and Understanding of Emotion.*** The scoring key for basic emotions in this study was drawn from Widen and Russell (2003), who used a scoring key based on ratings of two judges blind to the source of the labels. The authors also used the same method to develop a scoring key for the social emotions. Both scoring keys were used to score the responses given in this study. Responses varied from being solely listed in syntax to being embedded in a phrase (e.g., very scared). If a participant listed an acceptable emotional term, then they received a score of one for the question. If they listed an incorrect emotional term, then they received a zero. The total score for the face labeling section was the sum of the score of each question in the face labeling task. The total score for the free-labeling section was the sum of the score of each question in the free-labeling task.

Regulation of emotion. The scoring for the CMS consisted of assigning a numerical value based on the answer to each multiple-choice question. Responses range from aggressive (1) to collaborative and compromising (5; Developmental Studies Center, 2000). The overall scaled score is the mean of the individual response scores (Developmental Studies Center, 2000).

Data analyses

Analyses were conducted in SPSS version 23. Preliminary analyses included descriptive statistics and correlations between emotional intelligence and academic performance. Primary analyses included logistic regressions, which provide the likelihood of a child being either

American or Japanese based on the unique variance of each variable in the model (Research Question 1), and follow-up *t*-tests, which provide an indication for the size of the difference between American or Japanese children on a particular variable (Research Questions 1). Primary analyses also included a linear regression used to explore the unique associations between academic achievement and emotional intelligence and a hierarchical linear regression exploring the interactions between each indicator of emotional intelligence and nationality (Research Question 2). Finally, based on dialect theory, the preference of Japanese and American students for a name and/or character from their ethnicity was explored using *t*-tests, which elucidated score differentials when students were presented with culturally similar and dissimilar stimuli (Research Question 3).

Results

Preliminary Analyses

Descriptive statistics. Table 3 includes the descriptive statistics for the combined population as well as for each individual country. Participants recruited in the US were on average 9.30 years (*SD* = 1.07). A majority of students (67 students) were in 4th grade, and there was a wide distribution, with 4.80% of student in 2nd grade, with 29.90% of students in 3rd grade, 45.60% of students in 4th grade, and 19.70% of students in 5th grade. The average grade level was 1.80 (*SD* = 0.81) (where 3rd grade was coded as 1, 4th grade was coded as 2, and 5th grade was coded as 3). The sample was 55.8% male and 44.2% female.

Participants recruited in Japan were on average 9.32 years (*SD* = 0.88). A majority of students (58 students) were in 4th grade, but there was a fairly even distribution, with 28.30% of students in 3rd grade, 36.50% of students in 4th grade, and 35.20% of students in 5th grade. The

average grade level was 2.07 (*SD* = 0.80) (where 3rd grade was coded as 1, 4th grade was coded as 2, and 5th grade was coded as 3). The sample was 48.40% male and 51.60% female

The average academic and emotional intelligence scores for both populations are listed below. The average academic score for the United States sample was 7.63 (*SD* = 1.87), while the average academic score for the Japanese sample was 7.60 (*SD* = 1.76). The average face labeling score for the United States sample was 4.68 (*SD* = 1.64), while the average face labeling score for the Japanese sample was 2.89 (*SD* = 1.29). The average free-labeling score for the United States sample was 7.52 (*SD* = 2.31), while the average free-labeling score for the Japanese sample was 5.88 (*SD* = 2.44). The average CMS score for the United States sample was 3.33 (*SD* = 0.90), while the average CMS score for the Japanese sample was 3.26 (*SD* = 0.74).

Correlations. Table 4 presents the bivariate correlations for the entire sample, both students from the United States and students from Japan. Correlations indicated that students from the United States performed significantly better than students from Japan in their reading scores, face labeling, scores and free-labeling scores. However, students from Japan were in significantly higher grades levels that students from the United States. Girls from both countries scored significantly higher than boys in their reading scores and CMS scores. Older children scored significantly higher than younger children in their free-labeling scores. However, younger children scored significantly higher than older children in their CMS scores. Children in lower grades in both the United States and Japan scored significantly higher than children in upper grades in their CMS scores. Children with higher reading scores scored significantly higher than those with lower reading scores in their math scores, total academic scores, face labeling scores, and free-labeling scores. Children with higher math scores scored significantly higher than those

with lower math scores in their total academic scores. Children with higher total academic scores scored significantly higher than those with lower total academic scores in their total free-labeling scores. Children with higher face labeling scores scored significantly higher than those with lower face labeling scores in their total free-labeling scores well as CMS scores.

Correlations within the American sample. Girls from the United States scored significantly higher than boys from the United States (*r*s (147) = 0.21– 0.25, *p*s < 0.05) in their reading scores and face labeling scores. An increase in age for students from the United States was significantly associated (*r*s (147) = 0.27– 0.87, *p*s < 0.01) with upper grade levels, higher reading scores and higher academic scores, as well as higher free-labeling scores. Children in upper grades scored significantly higher than children in lower grades (*r*s (147) = 0.24– 0.47, *p*s < 0.01) in their reading scores, total academic scores, and free labeling scores. However, there was a significant negative correlation between grade level and CMS scores (*r*s (147) = -0.19, *p*s < 0.05). Children with higher reading scores scored significantly higher than those with lower reading scores (*r*s (147) = 0.19– 0.78, *p*s < 0.05) in their math scores, total academic scores, face labeling scores, and free labeling scores. Children with higher math scores scored significantly higher than those with lower math scores (*r*s (147) = 0.24– 0.83, *p*s < 0.01) in their total academic scores as well as their free labeling scores. Children with higher total academic scores scored significantly higher than those with lower total academic scores (*r*s (147) = 0.17– 0.31, *p*s < 0.05) in their total face labeling as well as free labeling scores. Children with higher face labeling scores scored significantly higher than those with lower face labeling scores (*r*s (147) = 0.21– 0.27, *p*s < 0.05) in their total free labeling as well as CMS scores.

Correlations within the Japanese sample. Girls from Japan scored significantly higher than boys from Japan (*r*s (159) = 0.20, *p*s < 0.05) in their CMS scores. An increase in age for

students from Japan was significantly associated (*r*s (159) = 0.87, *p*s < 0.01) with upper grade levels. However, older children performed significantly worse than younger students (*r*s (159) = -0.17– -0.22, *p*s < 0.01) in their reading scores, total academic scores, and CMS scores. Children in upper grades scored significantly lower than children in lower grades (*r*s (159) = -0.25– -0.21, *p*s < 0.05) in their reading scores, total academic scores, and CMS scores. Children with higher reading scores scored significantly higher than those with lower reading scores (*r*s (159) = 0.17– 0.80, *p*s < 0.05) in their math scores, total academic scores, and CMS score. Children with higher math scores scored significantly higher than those with lower math scores (*r*s (159) = 0.80, *p*s < 0.01) in their total academic scores. Children with higher face labeling scores scored significantly higher than those with lower face labeling scores (*r*s (159) = 0.16, *p*s < 0.05) in their free labeling scores.

Cross-Cultural Comparisons

An omnibus logistic regression analysis was conducted to predict nationality, using academic performance, face labeling total, free-labeling total, CMS total, age, and gender score as predictors. The model fit the data well, χ^2 (6) = 119.88, $p < .001$, Nagelkerke's $R^2 = 0.43$. Odds ratios for all variables are listed in Table 5. This analysis allowed us to test the interaction of all the variables involved in the comparison of academic performance and emotional intelligence in the United States and Japan.

Cross-cultural comparison of academic performance. In order to determine if there is a cross-cultural difference in academic performance, the academic performance odds ratio from the above logistic regression was analyzed. The odds ratio for the academic performance variable was 1.10 ($p = 0.24$), which suggests that students who scored higher on the academic assessment were 1.10 times more likely to be from the United States.

To define the size of the difference in academic performance, an independent-samples *t*-test was conducted to compare three components of academic performance—reading total score, math total score, and total academic score—in both the United States and Japanese populations. There was not a significant difference between the United States sample and the Japanese sample in the overall academic score; however, there was a significant difference in reading scores between the two populations as well as a marginal difference in math scores.

The total academic score for the United States sample and the Japanese sample was not statistically significant, $t(304) = 0.17$, $p = 0.87$, $d = 0.02$. On average, children from the United States ($M = 7.63$, $SD = 1.87$) scored 0.02 standard deviations higher than children from Japan ($M = 7.60$, $SD = 1.76$), which is below Cohen's (1988) conventions for a small effect ($d = 0.2$).

However, there was a statistical difference between the reading scores of the two populations. The total reading score for the United States sample and the Japanese sample was statistically significant, $t(304) = 2.29$, $p = 0.02$, $d = 0.27$. On average, children from the United States ($M = 3.99$, $SD = 1.01$) scored 0.27 standard deviations higher than children from Japan ($M = 3.70$, $SD = 1.11$), which falls between Cohen's (1988) convention for a small and medium effect ($0.2<d<0.5$).

There was also a marginal difference in total math score between the samples, $t(304) = -1.91$, $p = 0.06$, $d = -0.22$. On average, children from the United States ($M = 3.64$, $SD = 1.23$) scored 0.22 standard deviations lower than children from Japan ($M = 3.89$, $SD = 1.01$), which is below Cohen's (1988) conventions for a small effect ($d = 0.2$).

Cross-cultural comparison of emotional intelligence. In order to determine if there is a cross-cultural difference in emotional intelligence, the odds ratios of all the emotional intelligence variables were analyzed. The odds ratio for the free-labeling variable was 0.80 ($p =$

0.00), which suggests that students who scored higher on the academic assessment were 0.80 times more likely to be from the United States. Moreover, the odds ratio for the face labeling variable was 0.42 ($p = 0.00$), which suggests that students who scored higher on the academic assessment were 0.42 times more likely to be from the United States. Finally, the odds ratio for the face labeling variable was 1.06 ($p = 0.76$), which suggests that students who scored higher on the academic assessment were 1.06 times more likely to be from the United States.

To define the size of the difference in emotional intelligence, an independent-samples *t*-test was conducted to compare the three components of emotional intelligence in both the United States and Japanese populations. There was a significant difference in the total score between face labeling in the United States sample and the Japanese sample, $t(304) = 10.67$, $p < 0.001$, $d = 1.21$. On average, children from the United States ($M = 4.68$, $SD = 1.64$) scored 1.21 standard deviations higher than children from Japan ($M = 2.89$, $SD = 1.29$), which exceeds Cohen's (1988) conventions for a large effect ($d = 0.80$).

There was also significant difference in the total score for free-labeling in the United States population ($M = 7.52$, $SD = 2.31$) and the Japanese population ($M = 5.88$, $SD = 2.44$); $t(304) = 6.01$, $p = 0.00$, $d = 0.69$. The effect size for this analysis ($d = 0.69$) was found to fall between Cohen's (1988) convention for a medium and large effect ($0.5<d<0.8$).

Differences in the total CMS score were found to be statistically non-significant between the United States population ($M = 3.33$, $SD = 0.90$) and the Japanese population ($M = 3.26$, $SD = 0.74$); $t(304) = 0.72$, $p = 0.47$, $d = 0.33$. The effect size for this analysis ($d = 0.33$) was found to fall between Cohen's (1988) convention for a small and medium effect ($0.2<d<0.5$).

Cross-Cultural Comparison of the Relationship Between Emotional Intelligence and Academic Performance

To determine the relationship between academic performance and emotional performance cross-culturally, academic performance was regressed on emotional intelligence and nationality as well as the interaction of emotional intelligence and nationality (Table 6). In model two, there was only one significant interaction, nation by free-labeling, depicted in Figure 1. Figure 1 shows that the association between free-labeling and academic performance was stronger for students from the United States.

Effect sizes for all of the variables (sr^2) were below Cohen's conventions for a small effect size (0.2) (Cohen, 1988). For model one, academic performance explained approximately 0% of the variance in emotional intelligence scores ($R^2 = 0.00$, $F(6, 299) = 2.51$, $p = 0.02$). For model two, academic performance explained approximately 1% of the variance in the interactions of nation and emotional intelligence outcomes ($R^2 = 0.10$, $F(9, 296) = 2.54$, $p = .01$).

The Effect of Culturally Appropriate Stimuli on Student Performance

To determine if Japanese students are better at recognizing facial expressions and stories using a Japanese name and character, and conversely if Caucasian students are better at recognizing facial expressions and stories with a Caucasian name and character, an independent samples t-test was used to compared the scores on face labeling and free-labeling measures using an Japanese/Caucasian character for both groups. There was a significant difference in the total score for face labeling with a Japanese character in the United States population ($M = 2.08$, $SD = 1.02$) and the Japanese population ($M = 1.26$, $SD = 0.78$); $t(304) = 7.91$, $p < 0.001$, $d = 0.90$. Children in the United States scored 0.90 standard deviations higher than children in Japan, which is considered a large effect by Cohen (1988). Additionally, nationality predicted approximately 17% of the variance in face labeling scores of Japanese characters, $R^2 = 0.17$.

There was also a significant difference in the total score for free-labeling with a Japanese character in the United States population (M = 3.87, SD = 1.23) and the Japanese population (M = 2.91, SD = 1.39); $t(304) = 6.41$, $p = 0.00$, $d = 0.73$. Children in the United States scored 0.73 standard deviations higher than children in Japan, which is considered to be between a medium and large effect by Cohen (1988). Additionally, nationality predicted approximately 12% of the variance in free-labeling scores of Japanese characters, $R^2 = 0.12$.

In the condition when a Caucasian face/name was used, students from the United States also scored significantly higher than students from Japan. There was a significant difference in the total score for face labeling with a Caucasian character in the United States population (M = 2.60, SD = 0.99) and the Japanese population (M = 1.62, SD = 0.81); $t(304)$=9.47, $p = 0.00$, d = 1.08. Children in the United States scored 1.08 standard deviations higher than children in Japan, which is considered to be above a large effect by Cohen (1988). Additionally, nationality predicted approximately 23% of the variance in face labeling scores of Caucasian characters, R^2 = 0.23.

There was also a significant difference in the total score for free-labeling with a Caucasian character in the United States population (M = 3.65, SD = 1.30) and the Japanese population (M = 2.97, SD = 1.391); $t(304) = 4.36$, $p = 0.00$, $d = 0.51$. Children in the United States scored 0.51 standard deviations higher than children in Japan, which is considered a large effect by Cohen (1988). Additionally, nationality predicted approximately 6% of the variance in free-labeling scores of Japanese characters, $R^2 = 0.06$.

Discussion

Based on the results of the study, there were three major findings that will be highlighted in the context of the relationship between emotional intelligence and academic performance.

The first interesting result is that the correlation between emotional intelligence and academic performance was most apparent for the free-labeling variable in both populations. Secondly, there was a significant difference in emotional intelligence between the United States and Japan when using the face labeling and free-labeling tasks; however, there was no difference when using the CMS task. Finally, students from the United States performed better than student from Japan in both the face labeling and free-labeling conditions, even when the face and name was Japanese. These results should be used to shed light on the relationship between emotional intelligence and academic performance in the United States and Japan.

Correlation between Academic Performance and Emotional Intelligence

Based on the preliminary analyses, we can look at the correlation table (Table 4) to answer the question of whether emotional intelligence is correlated with academic performance. Significant correlations existed between a participant's face labeling score and their reading scores as well as their free-labeling scores and their reading, math, and total academic scores. These results indicate that performance on the free-labeling task was highly correlated with all academic outcomes. On the other hand, face labeling was only significantly correlated with the reading score. Thus, it seems that the correlation between emotional intelligence and academic performance is most apparent for the free-labeling variable. This finding could be due to the fact that the free-labeling task required students to both read and label an emotional-laden vignette, rather than just label the emotion (as in the face labeling task). Not only does this task require emotional intelligence, but it also necessitates a baseline reading ability as well as a nuanced and mature vocabulary. The use of two skills that seem to be highly correlated with academic performance (reading ability and vocabulary), versus just one skill (vocabulary), could hint as to why the free-labeling task was so highly correlated with academic outcomes.

Cross-Cultural Comparison of Emotional Intelligence

Based on Research Question 1, we found that there was a difference in emotional intelligence between the United States and Japan when using the face labeling and free-labeling tasks; however, there was no difference when using the CMS task. Overall, this suggests that there is a difference in emotional intelligence cross-culturally when using the face labeling and free-labeling measures employed in this study, but the CMS task was not a good indicator of this difference.

A possible explanation for this phenomenon revolves around the culture of education in Japan. The Japanese education system is built on merit; however, it is also presents an extreme dichotomy between elementary school and upper grades. In elementary school, students and teachers collaborate, with an emphasis placed on deregulation, diversity, and individuality (Ishikida, 2005). However, by middle school and high school, students are severely limited in their ability to focus on organic intellectual cultivation due to stringent high school and college entrance exams (Ishikida, 2005). This transition from collaboration and individualism to high-pressure exam preparation illustrates the extreme dichotomy between the two levels of education in Japan. It could be that the meritocratic mindset of middle school and high school affects the overall system to such a degree that it hampers emotional intelligence even in younger generations. Conversely, it might be that it is not the fault of the intensity of later years, rather that elementary schools in Japan might be focusing on a well-rounded education but not truly emphasizing models that directly increase emotional intelligence. Without further research, it is impossible to know which explanation, if either, is the true cause of the difference in emotional intelligence between the United States and Japan. However, it can be assumed that due to the significant amount of time children in Japan spend in school or after-school programs, that

education in some way affects their development of emotional intelligence. These are only a few reasons that may explain why the results of the present study do not match the aforementioned hypotheses.

The Effect of Culturally Appropriate Stimuli on Student Performance

Results from Research Question 3 indicate that in both the face labeling and free-labeling conditions, students from the United States performed better than students from Japan, even when the face and/or name was Japanese. Moreover, when the face and/or name was Caucasian, students from the United States still scored better on both the face labeling and free-labeling tasks. Consequently, it appears that despite trying to control for cultural bias, Japanese students did not score higher on questions that used a Japanese name/character. Surprisingly, Japanese students actually performed better on both face labeling and free-labeling in the scenario when a Caucasian character was used. So, not only did Japanese students perform significantly lower than students from the United States for both Caucasian and Japanese faces in general, but compared to their score using Japanese names/characters, the Japanese population scored better when presented with a Caucasian face.

These results are contrary to dialect theory, which argues that emotion is a universal language and that it is more difficult to understand someone speaking a different dialect (Elfenbein, 2013). Translating this theory to emotion, it is easier to judge an emotional expression from your own cultural group versus a foreign group (Elfenbein, 2013). However, dialect theory has mostly been applied to adult populations, so it could be that it does not hold as well for younger populations.

These findings suggest that students from the United States score universally higher of tests of emotional intelligence, regardless of the use of culturally appropriate stimuli. Moreover,

it also appears that within the Japanese population, Caucasian characters elicit higher scores as compared to Japanese characters using the two measures selected for this study. While stimuli for both cultures might have exhibited nonverbal accents—defined by dialect theory as cultural differences that leak through in photos even when researchers attempt to dampen every possible cultural difference—we attempted to match stimuli as best as possible to the culture of the participating populations. Thus, regardless of the cultural appropriateness of the character name and face, it appears students from the United States population scored significantly higher on both the face labeling and free-labeling tasks.

Cross-Cultural Comparison of How Emotional Intelligence Affects Academic Performance

In the broader context of the relationship between emotional intelligence and academic performance, the above results can highlight interesting comparisons between the United States and Japan. It is notable that participants from the United States performed almost equal on academic assessments compared to students in Japan (Research Question 1). This finding could be due to a variety of factors, but it is most likely due to the population studied in the United States. The United States population was drawn from private, charter, and religious schools, rather than public schools. Due to the selective nature of these schools, students are most likely above average in their academic performance. Thus, students in this sample could be scoring above national averages due to the selective nature of the schools they attend.

Moreover, in comparison to the PISA or TIMSS assessments discussed previously, the academic assessment used in this study was significantly truncated and less comprehensive. Due to the shorter nature of the academic assessment used, the assessment may not have captured the full intelligence of the students in Japan, or it might have highlighted skills in which students from the United States were particularly proficient. Also, since the questions were from the

California Standards Test, students from the United States might have been more familiar with the question types compared with Japanese students, explaining their higher performance. Thus, there might have been an unintentional confound by using questions written in the United States. These explanations could explain why academic scores of students from the United States were not significantly lower than the Japanese scores, which is contrary to worldwide tests of academic performance (e.g., PISA, 2012).

Overall, despite significantly different levels in emotional intelligence, there was not a significant difference in academic performance between the United States and Japan. This finding suggests that the relationship between emotional intelligence and academic performance is not a direct as previously thought. In the specific populations used in this study, students did not demonstrate significant differences in academic performance; however, they did exhibit differences in emotional intelligence. It appears that even though students form the United States in this study performed similarly to students in Japan on the academic assessment, this trend might not hold for students across the nation based on international tests of academic achievement. Moreover, students in Japan might have performed better if an academic assessment derived from Japanese standardized tests had been used.

Study Limitations

In cross-cultural research where translation is necessary, methods are often extremely difficult to validate and ensure against bias. In social science research, there are two types of translation: symmetrical or decentered translation and asymmetrical or unicentered translation (Werner and Campbell, 1970). Decentered translation aims at maintaining loyalty to the meaning of each question, rather than focusing on maintaining the nuances of the source language (Werner and Campbell, 1970). Conversely, unicentered translation seeks to maintain

loyalty to the source language, with the importance of the original language dominating the importance of the content (Werner and Campbell, 1970). For this study, we attempted to focus on decentered translation, working to keep the meaning of each question accessible for both English and Japanese speakers, while still retaining loyalty to the sentence structure and content that was presented.

Four separate translators, who were native speakers of Japanese as well as university students or professors, translated and reviewed the translation of each question. And while imperfect translation will always be a valid critique, every possible measure was taken to maintain validity to the question as well as produce a question that would be understood in Japanese. Moreover, in the translation of Japanese student responses back to English, there was a further level of possible translation error. Thus, it is safe to assume there were unintended biases and translational errors in regards to the Japanese data.

An additional confound concerns the recruitment methods and schools used in the study. In the United States, children were recruited by reaching out to afterschool centers and schools on the East Coast and in the Midwest. These programs often self-selected to participate in the study. In Japan, one school was contacted, and when they agreed to participate, no other schools were contacted. Due to our limited resources and collaborators in Japan, we did not have the time or money to assess students at many different schools in the country. Thus, the different recruitment methods were simply due to the limited options we had in Japan; however, the different sites and recruitment methods could have unintentionally confounded the results.

Conclusion

Overall, the results of this study illuminate many interesting facets of emotional intelligence in students from the United States and Japan. However, it does not appear that

emotional intelligence is the driver of academic performance in these populations. Students in the United States had significantly higher levels of emotional intelligence, but very similar academic scores to student in Japan. However, future research could explore how the United States and Japan compare when using students from public schools in the United States. This population could provide a more accurate idea of the difference between the general study populations in the United States and Japan. Taken together, it seems that the cross-cultural gap in emotional intelligence is significant in the populations we assessed, but the current findings do not explain the differences in overall academic achievement between the United States and Japan.

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Table 1. First Set of Stories with Causes and Consequences for Each Emotion

Emotion	**Story**
Happiness	One day, it was John's birthday. All his friends came to his birthday party and gave him presents. John jumped up and down and clapped his hands.
Anger	One day, John was waiting in line. Then a girl cut in line in front of him. She didn't even ask. John shoved her out of line and yelled at her.
Fear	One day, John was walking down the street when a big dog started growling and chasing him. John screamed and ran away as fast as he could.
Surprise	One day, John came home, and his mom's hair was pink. This had never happened before. John just stared and tried to figure out why his mom's hair was pink.
Disgust	One day, John took a big bite of an apple. But it was rotten inside. It tasted awful. John spit it out as fast as he could and threw the apple on the ground. He did not want to touch it.
Embarrassment	One day, John spilled grape juice all over his white shirt. All the kids laughed at him. John's face turned very red, and he looked away from everyone. He wished that he could hide.
Compassion	One day, John was walking on a slippery sidewalk. John saw another kid slip and hurt himself very badly. John went over to the boy to see if he was okay.
Shame/Guilt	One day, John took his sister's favorite teddy bear and threw it in the trash. His sister cried and cried. John wanted to give it back but he couldn't because his mom had already taken out the trash. John stayed in his room and didn't want to talk to anyone.
Contempt	One day, John was at school. There was a boy in his class who always did stuff to get the teachers attention. The boy was always acting up in class so she would notice him. Or if the teacher wanted someone to help her, he always wanted to be picked. John didn't talk to that boy, and he didn't sit next to him.

Table 2. Second Set of Stories with Causes and Consequences for Each Emotion

Emotion	**Story**
Happiness	One day, it was a nice day so Haruto went outside to play in his backyard. As he walked outside, the sun was shining and the birds were signing in the tree.
Anger	One day, Haruto built a block tower. But then a boy came and knocked Haruto's tower down on purpose. Haruto yelled at the boy and hit him, He clenched his fists and stomped his feet. He yelled really loud.
Fear	One day, Haruto was sleeping in his bed. Then something woke him up. His room was dark, and he was all alone. Something was moving in his closet: He thought it was a monster. He screamed and pulled the covers up over his head.
Surprise	One day, Haruto opened the fridge. But there was no food inside. There were only tools. Haruto just stared and tried to figure why there were tools in the fridge.
Disgust	One day, Haruto saw a yummy looking apple on the counter and decided to eat it. But when he picked it up, his hand squished right through a slimy rotten spot. He through the apple away and looked a brown stuff on his hand.
Embarrassment	One day, Haruto was at school and peed in his pants. There was a big wet mark on his jeans. All the kids laughed at him. His face turned very red, and he looked away from everyone. He wished that he could hide.
Compassion	One of the kid's in Haruto's class didn't have any lunch. She looked really hungry. Haruto shared his sandwich with her and gave her one of his cookies.
Shame/Guilt	Haruto decided to toss a baseball in the house even though it was against the rules. He threw the ball a little too high and smashed a window. His mom came in and said she was disappointed in him.
Contempt	Haruto and his friend did a group project together. Haruto spent weeks working on his half. On the day the project was due, Haruto's friend told him he hadn't done anything and they would probably fail. Haruto didn't want to work with that friend on a project ever again.

Table 3. Means and Standard Deviations for Participants Divided by Total Population Sample, United States Sample, and Japanese Sample

Population	N	M	SD	Range	Skew	Kurtosis
			Age			
Total	306	9.31	0.98	8-11	0.17	-0.99
United	147	9.30	1.07	8-11	0.23	-1.20
Japan	159	9.32	0.89	8-11	0.90	-0.76
			Grade			
Total	306	1.94	0.81	0-3	-0.15	-0.90
United	147	1.80	0.81	0-3	-0.18	-0.52
Japan	159	2.07	0.80	1-3	-0.13	-1.41
			Academic Total			
Total	306	7.61	1.81	1-10	-0.90	0.44
United	147	7.63	1.87	2-10	-0.80	-0.03
Japan	159	7.60	1.76	1-10	-1.02	1.03
			Face Labeling Total			
Total	306	3.75	1.72	0-9	0.31	0.10
United	147	4.68	1.64	1-9	0.14	0.03
Japan	159	2.89	1.29	0-6	-0.14	-0.33
			Free-Labeling Total			
Total	306	6.67	2.50	1-13	-0.16	-0.59
United	147	7.52	2.31	2-12	-0.50	-0.25
Japan	159	5.88	2.44	1-13	0.16	-0.30
			CMS Total			
Total	306	3.29	0.82	0-5	-1.06	1.91
United	147	3.33	0.90	0-5	-1.37	2.73
Japan	159	3.26	0.74	1-5	-0.59	0.19
			Gatekeeping Happy			
Total	306	0.97	0.17	0-1	-5.60	29.53
United	147	0.99	0.12	0-1	-8.48	70.95
Japan	159	0.96	0.21	0-1	-4.49	18.37

Table 4. Bivariate Correlations between Academic and Emotional Intelligence Variables

	1	2	3	4	5	6	7	8	9
1. Nation									
2. Gender	.074								
3. Age	.011	.049							
4. Grade	.164**	.102	.858**						
5. Reading Score	-.130*	.119*	.112	.074					
6. Math Score	.109	.004	.002	.017	.296**				
7. Total Academic	-.010	.075	.070	.056	.785**	.808**			
8. Face Labeling	-.522**	.095	.045	-.034	.153**	-.021	.080		
9. Free-Labeling	-.326**	.081	.193**	.105	.180**	.125*	.191**	.341**	
10. CMS Total	-.041	.128*	-.136*	-.199**	.038	.073	.071	.127*	.055

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Table 5. Odds Ratios

Variable	Odds Ratio	*p*
Total Academic	1.10	0.24
Face Labeling	0.42	0.00
Free-Labeling	0.80	0.00
CMS Total	1.06	0.76
Age	1.20	0.21
Gender	2.27	0.01

Table 6. Regression of Emotional Intelligence on Academic Performance

	b	sr^2	*p*	R^2	ΔR^2
Model 1				0.0	0.05
Face Labeling	0.04	0.00	0.55		
Free-Labeling	0.13	0.03	0.00		
CMS Total	0.13	0.00	0.32		
Nation	0.26	0.00	0.30		
Gender	0.15	0.00	0.48		
Age	0.07	0.00	0.53		
Model 2				0.10	0.02
Nation X Free-Labeling	-0.17	0.01	0.06		
Nation X Face Labeling	-0.14	0.00	0.34		
Nation X CMS	0.42	0.00	0.11		

Note. CMS: Conflict Management Scale; Nation: US = 0: Japan = 1; Gender: Male = 1, Female = 0.

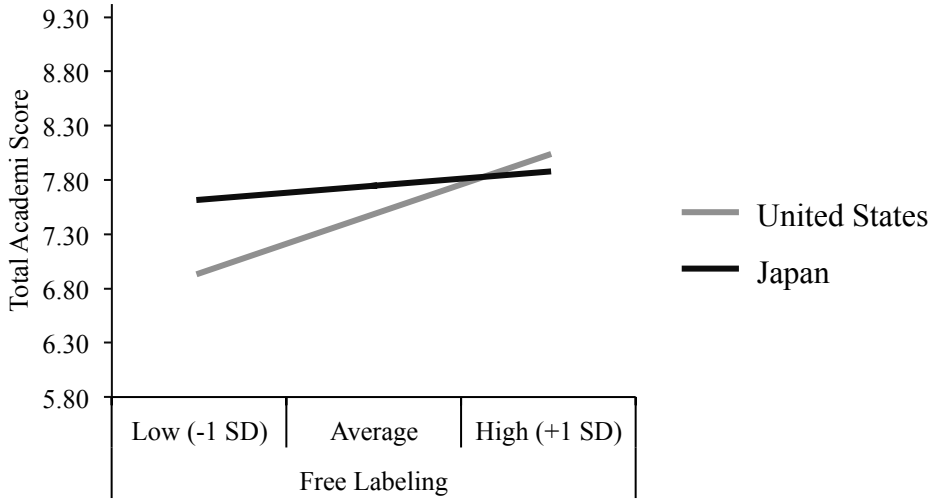

Figure 1. Nation and free-labeling interaction for United States and Japanese populations.