

Emotion and Intercultural Communication

David Matsumoto  
San Francisco State University

Seung Hee Yoo  
Yale University

Jeffery A. LeRoux  
San Francisco State University

To appear in  
Helga Kotthoff and Helen Spencer-Oatley (eds.), *Handbook of Applied Linguistics, Volume 7: Intercultural Communication*. Mouton – de Gruyter Publishers.

Keywords: Emotion, emotion regulation, openness, flexibility, critical thinking, intercultural communication, intercultural sensitivity, intercultural adaptation, intercultural adjustment

Address all correspondence to  
David Matsumoto  
Department of Psychology  
San Francisco State University  
1600 Holloway Avenue  
San Francisco, CA 94132  
TEL: 510-236-9171  
FAX: 510-217-9608  
Email: [dm@sfsu.edu](mailto:dm@sfsu.edu)

## Emotions and Intercultural Communication

In this chapter, we examine the role of emotions in intercultural communication, and suggest that the ability to regulate emotion is one of the keys to effective intercultural communication and adjustment. Previous work on intercultural communication effectiveness has generally focused on its cognitive components, including cultural knowledge, language proficiency, and ethnocentrism. Instead, we focus on emotion in intercultural communication episodes, and particularly on the skills necessary for the resolution of inevitable intercultural conflict. We argue that emotion regulation is a gatekeeper ability that allows people to engage in successful conflict resolution that leads to effective, long-term intercultural communication.

We first describe the role of culture in the communication process, and then the concepts of intercultural communication, adaptation, and adjustment. We describe factors that previous research has identified related to adjustment, and then discuss strategies for engaging in successful intercultural communication, focusing on the role of emotions, but also highlighting the importance of critical thinking and openness/flexibility. We discuss a growth model of intercultural adjustment potential that has at its core the ability to regulate emotions. We review empirical support for this importance of emotion regulation to predict intercultural adjustment, and then review literature examining possible cultural differences in emotion regulation. Throughout, we blend literature from both communication and psychology in producing a unique perspective on this topic.

### **The Role of Culture in the Communication Process**

#### *Cultural Influences on Verbal Language and Nonverbal Behavior Encoding and Decoding*

Cultural groups are often characterized by distinct languages, and subcultures often have dialects within a language. Each is a unique symbol system that denotes what a culture deems important in its world. That words exist in some languages and not others reflects the fact that different cultures symbolize their worlds differently. For example, Whorf (1956) pointed out that Eskimo language had three words for snow while the English language had only one. The German word *schadenfreude* and the Japanese word *amae*, which do not exist in English, are other examples. Self- and other-referents differ across languages (Suzuki, 1978), as do counting systems. Linguistic differences in counting systems are thought to contribute to differences in math achievement between the U.S. and Asian countries (Stigler and Baranes, 1988).

Culture not only affects language lexicons, but also its function or pragmatics. For example, Kashima and Kashima (1998) examined 39 languages and found that cultures whose languages allowed for pronouns to be dropped from sentences tended to be less individualistic, which they interpreted as reflecting different cultural conceptualizations of self and others. Gudykunst and his colleagues have shown that perceptions of personalization, synchrony, and difficulty in ingroup and outgroup communications differ according to meaningful dimensions of cultural variability (Gudykunst and Nishida, 1986; Gudykunst, Yoon, and Nishida, 1987). Culture, self-construals (i.e., self-concepts), and individual values affect communication styles across cultures (Gudykunst and Mody, 2001; Gudykunst et al., 1992; Kim et al., 1996). Cultural differences also exist in the use of apologies (Barnlund and Yoshioka, 1990), children's personal

narratives (Minami and McCabe, 1995), self-disclosure (Chen, 1995), compliments (Barnlund and Araki, 1985), and interpersonal criticism (Nomura and Barnlund, 1983).

That language helps to structure thought is known as the *Sapir-Whorf hypothesis*. Over the past forty years, research has shown considerable support for this hypothesis (Bloom, 1981; Davies, Sowden, Jerrett, Jerrett, and Corbett, 1998; Garro, 1986; Hoosain, 1986; Hoosain, 1991; Kay and Kempton, 1984; Niyekawa-Howard, 1968); but there have also been challenges to it, especially with regard to the influence of language lexicons and semantics (Au, 1983; Berlin and Kay, 1969; Rosch and Lloyd, 1978). That bilinguals give different responses to various psychological tests depending on the language they are speaking, however, also supports the Sapir-Whorf hypothesis (Abel and Kandel, 1998; Ervin, 1964; Hull, 1987; Matsumoto and Assar, 1992).

Cultures also differ considerably in their use of nonverbal behaviors. Although facial expressions of anger, contempt, disgust, fear, happiness, sadness, and surprise have a universal basis (Matsumoto, 2001), cultures differ in the rules that govern how these expressions are used. *Cultural display rules* are rules of expression management that dictate the appropriateness of emotion display depending on social circumstances (Ekman and Friesen, 1969). Learned from infancy, we are so adept at these rules that as adults, we use them automatically and without much conscious awareness. Their existence was first documented by comparing American and Japanese participants viewing stressful films while unknowingly being videotaped (Ekman, 1972; Friesen, 1972), and recent research has begun to explore their intricacies (Matsumoto, 1990; Matsumoto, Takeuchi, Andayani, Kouznetsova, and Krupp, 1998; Matsumoto, Yoo, Hiramaya, and Petrova, in press). Cultures also differ in other aspects of nonverbal behavior, including their use of gestures (Morris, Collett, Marsh, and O'Shaughnessy, 1980); gaze (Fehr and Exline, 1987); touch, physical contact, and interpersonal space (Hall, 1966, 1973; Watson, 1970; Watson and Graves, 1966); postures (Kudoh and Matsumoto, 1985; Matsumoto and Kudoh, 1987); and vocal characteristics and hand and arm movements (Vrij and Winkel, 1991; Vrij and Winkel, 1992).

Culture also influences the decoding process in communication. This occurs because of cultural influences in the development of ethnocentrism, stereotyping, and social cognition, which are all normal psychological components to everyday life. Cultural decoding rules are intimately associated with emotions and value judgments, and collectively form our self-concepts. The most recent research from our laboratory has demonstrated the link between cultural display rules that govern emotional displays and cultural differences in judgments of emotion (Matsumoto, Choi, Hiramaya, Domae, and Yamaguchi, 2003).

## **Intercultural Communication, Adaptation, and Adjustment**

### *The Characteristics of Intercultural Communication*

Intracultural communication refers to communication between interactants sharing the same cultural background; in intercultural communication interactants come from different cultures. During intracultural communication, interactants implicitly share the same ground rules of communication and interaction. In intercultural communication this is often not the case. One of the unique aspects of intercultural interactions is uncertainty and ambiguity concerning the

ground rules by which the interaction will occur, and the meaning of signals (Gudykunst and Nishida, 2001; Gudykunst, Nishida, and Chua, 1986; Gudykunst, Yang, and Nishida, 1985). Because of the pervasive influence of culture on all aspects of the communication process, we can not be sure that the rules by which two people from different cultures operate are similar or that the signals that are exchanged have the same meaning; there is inherent uncertainty in both the verbal and nonverbal behaviors that occur. Intercultural interactants generally engage with each other in a verbal language that is often not a native language for at least one, and sometimes both individuals, thus creating intrinsic uncertainty in the meaning of the words. Cultural differences in the use of all nonverbal channels produce uncertainty in the messages as well.

A second characteristic of intercultural communication is the inevitability of conflict and misunderstandings. During intercultural encounters, chances are great that others' behaviors do not conform to our expectations. When this occurs, we often interpret those behaviors naturally as transgressions against our value system. They produce negative emotions, which are upsetting to our self-concepts. These conflicts are inevitable in intercultural episodes with both people or with other agents of a cultural system (e.g., public transportation, the post office, shops and businesses). They are bound to accentuate differences in process, which inevitably lead to conflict or misunderstanding. Uncertainty contributes to this conflict. People may become impatient with or intolerant of the ambiguity, leading to anger, frustration, or resentment. Even after uncertainty is reduced, conflict is inevitable because of the differences in the meaning of verbal and nonverbal behaviors across cultures, and the associated emotions and values inherent in the cultural system. These produce differences in the interpretation of underlying intent among interactants (something that is no stranger to intracultural communication as well).

### *Intercultural Adaptation and Adjustment*

One of the most important consequences of and processes associated with intercultural communication is intercultural adaptation and adjustment. In our work we have found that it is important to make a distinction between adaptation and adjustment. Using Ward's approach, we believe that adaptation is based in the sociocultural domain (Ward, 2001), that is, it refers to the process of altering one's behavior to fit in with a changed environment or circumstances, or as a response to social pressure. One of the most well known models of adaptation, for instance, is Berry's (Berry, Kim, and Boski, 1988) analysis of the interaction styles for sojourners, immigrants, and refugees. In this model, four categories of interaction style are identified on the basis of the yes/no answers to two questions: (1) is it important to maintain my cultural identity and characteristics, and (2) do I value and want to maintain relationships with people of the host culture? Individuals who say yes to both are considered "integrators;" those who say no to both are "marginalizers." Those who say yes to the first and no to the second are "separators," while those who say no to the first and yes to the second are "assimilators." While research is not clear as to whether integration produces the most successful adjustment outcomes (see reviews by (Berry and Sam, 1997; Rudmin, 2003, 2003; Ward, 2001), clearly these processes refer to behavioral changes made in response to different environments.

In contrast, we define adjustment as the subjective experiences that are associated with and result from attempts at adaptation, and that also motivate further adaptation. Previous researchers have incorporated a wide range of outcome measures as adjustment, including self-

awareness and self-esteem (Kamal and Maruyama, 1990), mood states (Stone Feinstein and Ward, 1990), and health status (Babiker, Cox, and Miller, 1980) (all cited in (Ward, 2001). Some have developed synthesizing strategies to integrate these specific approaches in order to highlight a smaller number of features. For example, Brislin (1993) identified three factors of adjustment, including (1) having successful relationships with people from other cultures; (2) feeling that interactions are warm, cordial, respectful, and cooperative; and (3) accomplishing tasks in an effective and efficient manner. Gudykunst, Hammer, and Wiseman (1977) focused on these factors, and also included the ability to manage psychological stress effectively. Black and Stephens (1989) identified general adjustment involving daily activities, interaction adjustment involving interpersonal relations, and work adjustment related to work and tasks.

Adapting to a new culture can have both positive and negative adjustment outcomes. On one hand the positive consequences include gains in language competence; self-esteem, awareness, and health (Babiker et al., 1980; Kamal and Maruyama, 1990); self-confidence, positive mood, interpersonal relationships, and stress reduction (Matsumoto et al., 2001). Clearly when intercultural experiences go well, individuals report evolving in many qualitative, positive ways so that they are different, and better, individuals. These include the development of multicultural identities and multiple perspectives with which to engage the world.

On the other hand, the negative consequences include psychological and psychosomatic concerns (Shin and Abell, 1999); early return to one's home country (Montagliani and Giacalone, 1998); emotional distress (Furukawa and Shibayama, 1995); dysfunctional communication (Gao and Gudykunst, 1991; Okazaki-Luff, 1991); culture shock (Pederson, 1995); depression, anxiety, diminished school and work performance, and difficulties in interpersonal relationships (Matsumoto et al., 2001). In extreme cases negative adjustment results in antisocial behavior (gangs, substance abuse, crime) and even suicide. Fortunately all sojourners do not experience this wide range of psychological and physical health problems, but most have probably experienced *some* of these problems at some point in their sojourn.

Intercultural experience is comprised of continuous adaptation and adjustment to the differences with which we engage every day. This engagement is not easy because of the inevitability of conflict and misunderstandings due to the existence of cultural differences. Our ethnocentric and stereotypic ways of thinking, which are themselves normal, psychological functions, make it easy for us to create negative value judgments about those differences, conflicts, and misunderstandings. Negative emotions are also associated with these judgments. These negative reactions make it difficult for us to engage in more constructive methods of interacting, and keep us from truly appreciating those differences and integrating with people who are different.

One of the goals, therefore, of intercultural adaptation is to adopt an adaptation pattern that minimizes these stresses and negative adjustment outcomes, and maximizes positive ones. Negative adjustment outcomes often serve as important motivators for continued or refined adaptations to the new environment, a concept that is rooted in the notion that emotions are motivational (Tomkins, 1962, 1963) and that affect fuels cognitive development (Piaget, 1952). The development of strategies that deal with potential conflict and misunderstanding is

imperative in order to produce successful and effective long-term intercultural communication and relationships.

### *Factors that Predict Adjustment*

There have been many attempts to identify the factors that influence intercultural adjustment (reviewed in Matsumoto, 1999; Matsumoto et al., 2001). Studies in psychology have identified a wide range of variables such as knowledge, language proficiency, attitudes, previous experiences, levels of ethnocentrism, social support, cultural similarity, adventure, and self-construals. Among these, three factors have consistently emerged as leading contributors to adjustment: knowledge of host and home culture, ethnocentrism, and language proficiency. In fact it is precisely because of these factors that many intercultural training interventions involve language skill and knowledge training. The underlying assumption of such training is that if people can speak the language of the host culture, and if they know some basic facts about it, they can adjust to life better. Likewise, if people can recognize the existence of ethnocentrism – how our own cultural upbringing contributed to how we interact with the world and with others – and can recognize that our viewpoint is one of many valid and legitimate views, they will have successful adjustments.

Fostering positive intercultural adjustment requires the development of effective intercultural communication competence (ICC). ICC has been studied extensively in both the psychology and communication literatures (Gudykunst and Kim, 1984; Littlejohn and Jabusch, 1982; Powers and Lowery, 1984), and refers to the skills, talents, and strategies in which we engage in order to exchange thoughts, feelings, attitudes, and beliefs among people of different cultural backgrounds. We believe that ICC is reliant on a process that ensures successful and effective communication across cultures.

How can we develop such a process? One strategy would be to become thoroughly versant in a culture, recording the cultural similarities and differences found in it and building your own “cultural dictionary.” This is a formidable task, as there is so much about culture to learn and so little time, energy, and storage space available. This approach, however, is not without merit, and certainly many people develop such almanacs in their minds about a small number of cultures with which they become intimately familiar through travels, business, homestay programs, and the like. In fact, several studies (Gudykunst and Kim, 1984; Samovar and Porter, 1995; Wiseman, Hammer, and Nishida, 1989) have shown that related processes such as knowledge of and attitude toward host culture, ethnocentrism, social distance, and exposure to host culture members are all related to ICC.

But none of us can create that dictionary of culture for all the cultures and peoples we will possibly come in contact with, and many of us do not have the opportunities to become truly culturally fluent in this fashion. Instead, the vast majority of us will need to rely on a *process model* of intercultural growth to engage in effective intercultural communication. As conflicts based on intercultural communications and misunderstandings are inevitable, it becomes important to be able to control our negative emotional reactions when engaging with those differences. Those who can will then be able to engage in a more constructive intercultural process and open the door to more successful intercultural interactions. Those who cannot will

have that door closed to them. Emotions, therefore, are central to this process, and hold the key to successful or non-successful intercultural experiences.

### **An Emotion-Focused Way of Thinking about Intercultural Adjustment: The Psychological Engine of Intercultural Adjustment**

Emotions, in fact, are a large part of our lives. They color our life and our experiences, giving them meaning and relevance for ourselves and our well being. Sadness, anger, disgust, fear, frustration, shame, and guilt – while all negative and unattractive – are all important in that when we feel these emotions, they tell us something important about ourselves and our relationships with other people, events, or situations. Happiness, joy, satisfaction, pleasure, and interest are also important emotions in that they, too, give us important information about our relationships with others. Emotions are “read-out mechanisms” because they provide information to us about our status in relation to the world (Buck, 1984).

Emotions are also important because they motivate behaviors. Sadness and anger, for example, make us do something, just as happiness and joy reinforce behaviors. The father of modern day research and theory of emotion in psychology – Sylvan Tomkins – suggested that emotions *are* motivation, and if you wanted to understand why people behave the way they do, you had to understand their emotions (Tomkins, 1962, 1963). For these reasons, it is only natural that we give more consideration to this most-important and deserving part of our lives. Still, how do emotions affect our ability to adjust to different cultures?

We have approached this important question from the standpoint of understanding cultural differences and assuming that intercultural conflicts are inevitable because of those differences. We also assume that this conflict is laden with emotion such as anger, frustration, anxiety, or sadness. We further assume that that how well people deal with their negative emotions and resolve conflicts is a major determinant of intercultural adjustment success or failure. While intercultural adaptation inevitably involves many positive experiences as well, the key to successfully adjusting to a different cultural viewpoint is having the ability to resolve conflicts well.

In fact this viewpoint sits well with research in other areas of psychology. Research on married couples, for example, has shown that marital satisfaction is correlated with the ability of the couple to deal with and resolve differences of opinions and conflicts, and not necessarily by the amount of positive experiences they have together (Carstensen, Gottman, and Levenson, 1995; Gottman and Levenson, 1986, 1992; Gottman and Levenson, 1999; Gottman and Levenson, 2000; Levenson and Gottman, 1983). Conflict resolution skills are one of the keys to a happy marriage, and we believe they are a key to successful intercultural adjustment.

What role do emotions play in conflict resolution? When negative emotion is aroused during conflict, it is easy for people to be overcome by those feelings because they take over one’s thinking and feeling. Even people who are usually adept at thinking critically about things and who can act in perfectly moral and altruistic ways may not be able to think or act in such a manner when overcome by negative emotions. It is at these critical moments in the intercultural interaction episode – when negative emotions are aroused because of inevitable cultural

differences – that defines a key step in personal growth, which is a key to both intercultural success or stagnation. Individuals who can regulate their negative feelings, who can somehow put them on hold and not act directly upon them or allow them to overcome their way of thinking, acting, and feeling, will be able to then engage in other processes that will aid them to expand their appraisal and attribution of the causes of the differences. Once emotions are held in check and not immediately acted upon, these individuals can then engage in some aspect of critical thinking about the origins of those differences, hopefully allowing themselves to go beyond their own cultural lenses and framework and to entertain the possibility of other causes of the differences that they may not have even been aware of. Once this type of critical thinking can occur, these individuals will have an active choice of accepting or rejecting alternative hypotheses concerning the causes of those differences, and hopefully can have the openness and flexibility to accept rival hypotheses if it turns out their initial reactions were inaccurate.

By engaging in critical thinking about cultural differences and being open and flexible to new ways of thinking, people continually add new cognitive schemas in their minds to represent the world. The addition of new schemas adds complexity to the ability to interact with diversity, creating new expectations and greater awareness of similarities and differences. All of this is possible only when emotions are regulated and negative emotions are not allowed to get the best of one.

This process is not easy. Many of us who have experience dealing with children know that, despite their often altruistic nature, when something happens to hurt or upset them, their thinking and worldview revert to a more primitive way of dealing with and understanding their world. It becomes impossible for them to engage in altruistic acts, because they are locked into a more infantile mode of operation. This concept is known as “regression,” and it is not the sole domain of children and adolescents; adults regress at times as well. In these situations, it is easy for people to be overcome by those negative feelings; they “take over” one’s way of being. Even the most altruistic or critically minded person may not be able to think or act in such a manner when overcome by such negative emotions.

If negative emotions overcome us and dictate how we think, feel, and act, we cannot engage in critical thinking about those differences. People revert to a previous way of thinking about those differences that is rooted in their ethnocentric and stereotypic ways of viewing the world and others. Instead of creating rival hypotheses and new schemas that will stimulate growth in ways of thinking, this process reinforces pre-existing, limited ways of thinking. Openness and flexibility to new ideas and to these rival hypotheses are not even options because the new ideas don’t exist. Instead there is only a regurgitation of stereotypes and vindication of ethnocentric attitudes. This is a non-growth model.

The model we propose is similar to the concepts of assimilation and accommodation proposed by Piaget as a way to explain the mechanism by which cognitive development occurs (Cowan, 1978; Dasen, 1976; Piaget and Campbell, 1976; Piaget, Elkind, and Flavell, 1969; Piaget, Gruber, and Vonèche, 1977). Piaget proposed that infants and children attempt to adapt to their environments by first assimilating the environment into their existing cognitive schemas. When the environment did not match their schemas, infants and children will accommodate, that is, alter their existing schemas or add to them, thereby improving their cognitive skills. While



Piaget's theory of cognitive development focused on the process of assimilation and accommodation, what fueled accommodation, that is cognitive growth, was the negative affect that occurred when infants attempted to assimilate the environment into their existing schemas and they did not fit. According to Piaget (Cowan, 1978; Piaget, 1952), negative affect fueled cognitive development. In the same vein we propose that negative emotional experiences fuel the need to adapt and readapt to the environment. Those who adapt in positive, constructive ways will experience positive adjustment outcomes while those who do not will experience negative outcomes.

The four main ingredients to personal growth in relation to dealing with cultural differences in our model, therefore, are Emotion Regulation (ER), Critical Thinking (CT), Openness (OP), and Flexibility (FL). These are psychological processes based on emotion that are internal to people, and we call them the *psychological engine* of adaptation and adjustment. They are the psychological mechanisms by which intercultural success or stagnation, personal growth or vindication, will occur. Of these ER is the key ingredient as it is the gatekeeper of the growth process. If we cannot put our inevitable negative emotions in check, it is impossible to engage in what is clearly higher order thinking about cultural differences.

These psychological processes are crucial and central to the intercultural adjustment process. It does not matter how much information about host or home culture, or the degree of language skills one may have; if one cannot regulate emotions, think critically about situations, events, and people, and does not have the openness of mind and flexibility to adopt alternative positions to what one is familiar and accustomed, it is very difficult to develop intercultural sensitivity. If, however, one has these psychological attributes, then one has the psychological engine that will allow one to use knowledge and language in order to weather the storms of intercultural conflicts, rise above them, become a stronger, wiser, and more multicultural person, and truly integrate with people of different cultures.

The key, therefore, to achieving successful intercultural adjustment is the engagement of a personal growth process model where ways of thinking, person perception, and worldview are constantly being updated by the new and exciting cultural differences with which we engage in our everyday lives. The key to this engagement is the ability to regulate our emotional reactions and the other components of the psychological engine of adjustment. If we can do so, then the increasing cultural diversity of the world is an exciting research laboratory where we can constantly test our hypotheses, explore new hypotheses, throw out theories of the world that don't work, and create theories that do. In this framework the world is an exciting place to be and the challenge of cultural diversity and intercultural episodes and conflicts is a stage for forging new relationships, new ideas, and new people. It is the stage for intercultural success for those individuals who can engage in the processes outlined above. For these individuals, life is an enjoyable journey.

### **Empirical Support for the Growth Model of Intercultural Adjustment: The Intercultural Adjustment Potential Scale (ICAPS)**

*Development of the ICAPS*

For years the field has struggled with the creation of valid and reliable individual difference measures that will predict intercultural adjustment, for various reasons. For one, when researchers focus on variables that are culture- or context-specific, such as knowledge of host culture, it is nearly impossible to generate a valid measure because it would necessitate the assessment of knowledge that is specific to different cultures, and would be based on the assumption that such knowledge existed and was applicable to all contexts within that culture. Such measures would border on the assessment of knowledge of cultural stereotypes.

Another factor that has hindered the development of valid and reliable individual difference measures has been a lack of consensus on the underlying psychological components that are important to adaptation and adjustment. As mentioned above, while previous research has identified many variables that appear to be associated with successful adjustment, there is no coherent model that unifies these components into a comprehensive and understandable framework for predicting adjustment. The identification of several psychological variables as the keys to intercultural adjustment bypasses the problem of culture-specific knowledge, and views the *potential* for intercultural adjustment as a function of the psychological skills that individuals possess within them. In doing so, it does not rely on the knowledge or attitudes that sojourners or immigrants may have, or on the specific host culture in which they reside, or on language proficiency. Thus, the potential applicability of this approach is considerably larger than previous models that are tied to knowledge and attitudes.

Because there was no measure that could assess individual differences in the potential for intercultural adjustment based on the psychological skills outlined above, we opted to create our own, resulting in the development of the Intercultural Adjustment Potential Scale – ICAPS. Our strategy was to embody the several factors previously suggested as being related to intercultural adjustment in a pool of items and then to empirically test which had the strongest ability to predict intercultural adjustment, rather than to decide on an a priori basis which items should be included. We thus examined item content from a number of valid and reliable personality inventories assessing psychological constructs related to emotion regulation, critical thinking, openness and flexibility; we also included other skills such as interpersonal security, emotional commitment to traditional ways of thinking, tolerance of ambiguity, and empathy. These included the Eysenck Personality Inventory (EPI), the Beck Depression Inventory (BDI), the State-Trait Anxiety Inventory (STAI), the Bem Sex Role Inventory (BSRI), the original Minnesota Multiphasic Personality Inventory (MMPI) item pool, the California Personality Inventory (CPI), the NEO Personality Inventory (NEO-PI), the Big Five Personality Inventory (BFI), the California F-Scale, and the Interpersonal Reactivity Index. We created items based on the ideas gleaned from our examination of these scales, and also constructed our own items. This resulted in the initial development of 193 items.

One issue that arose early in this work was whether this test would be developed for any sojourner of any cultural background, or for those from a single culture. We opted for the latter, assuming that it would be more beneficial to create and validate a measure that has as high a predictive validity as possible for one cultural group, rather than develop a general measure at the sacrifice of predictive validity. The development of a culture-general measure would require the testing of people from multiple home cultures in multiple host cultures, which would be practically infeasible. If a culture-specific measure were created, however, it could serve as the

baseline platform for similar method development in other cultures. Thus, we focused on Japanese sojourners and immigrants, because of the literature in the area and our own expertise with this culture.

Because we were concerned with the cross-cultural equivalence of the 193 items, to take into account that respondents might have different English language capabilities, and to remove any colloquialism and difficulty of wording, two researchers created the items, reviewing and modifying all items in terms of language and style, rendering the wording appropriate for Japanese students who might possess a limited selection of English idioms commonly in use. Two native Japanese research assistants then reviewed the items, ensuring that they were understandable to native Japanese. Care was taken to exclude items that depended for their utility on a cultural value in which Japanese and U. S. culture differ. In all cases, items were written to adapt the cultural meaning of an item in the United States to the same cultural context from a Japanese perspective.

The final selection of items was based on their empirical ability to predict intercultural adjustment, rather than their theoretical potential for prediction. Items having little or nothing to do with intercultural adjustment were eliminated, even if elsewhere they reliably measured an aspect of an underlying psychological skill (e.g., openness) that was theoretically purported to be related to adjustment. Also, some items predicted adjustment better than others; thus, only items that predicted adjustment the best, according to empirical criteria, were retained. This resulted in a final pool of 55 items. To date we have conducted many studies documenting the reliability and validity of this 55-item ICAPS in predicting intercultural adjustment success. Table 1 shows a summary of the findings. The evidence demonstrates the unique contribution of the ICAPS to the field.

### *Initial Validity Studies of the ICAPS*

The first paper on the ICAPS from our laboratory reported eight studies that provided evidence for the internal, temporal, and parallel forms reliability of the ICAPS-55; its predictive ability with not only subjective indices of adjustment, but also using psychometrically standardized measures of depression and anxiety, peer ratings, and expert ratings based on interviews with the participants; its convergent validity with a similar measure; its construct validity with various personality scales (the five factor model of personality); its incremental validity; and its external validity in predicting changes as a result of intercultural seminars, and in identifying experts who work in the intercultural field (Matsumoto et al., 2001). All of these studies were conducted involving Japanese students as participants.

The next two articles on the ICAPS from our laboratory tested the boundaries of its predictive abilities (Matsumoto, LeRoux, Bernhard, and Gray, 2004; Matsumoto et al., 2003). In Studies 9 through 14, we were particularly interested in ascertaining whether the ICAPS could predict adjustment in Japanese non-student samples and for non-Japanese. The results of these studies replicated and considerably extended the findings reported previously by Matsumoto et al. (2001). ICAPS scores predicted adjustment in Japanese non-student samples in a variety of ways, including standardized measures of anxiety and depression, subjective indices of adjustment, satisfaction with life, and marital satisfaction. The ICAPS also predicted culture shock in Japanese student sojourners even when ICAPS was administered prior to these individual's

leaving Japan, and subjective adjustment in a general immigrant sample, as well as in samples from India, Sweden, and Central and South America. Finally, the ICAPS predicted subjective adjustment and satisfaction with life in Americans who had sojourned abroad as well. Coupled with the eight studies described earlier, these findings lent strong and consistent support to the psychometric reliability and validity of the ICAPS to predict intercultural adjustment.

Most recently three additional studies (Studies 15 through 17) examined the personality and behavioral correlates of the ICAPS (Matsumoto et al., 2004). The ICAPS was correlated not only with two widely used personality scales, but also with a behavioral task known as the In Basket, in which participants are required to act as managers of a company and deal with 30 items in an in basket. This task is widely used in studies of management and leadership skills, and the ICAPS was positively correlated with decision quality, decisiveness, written communication, delegation, goal setting, fact finding, initiative, and total performance. These findings are especially notable because they are all behaviors that are related not only to job performance as managers but also successful intra- and intercultural adjustment. The findings from all the studies reported provided strong evidence for the validity of the ICAPS to predict adjustment above and beyond that already predicted by personality. Furthermore, the ICAPS predicted actual behaviors above and beyond that already predicted by emotion recognition.

#### *Validation of the Psychological Skills Underlying the ICAPS*

The ICAPS was originally validated using a total score summed across all 55 items. Initial factor analyses using normative data (n approximately 2,300, half of whom were non-U.S. born and raised) suggested that four factors underlay the ICAPS – Emotion Regulation (ER), Openness (OP), Flexibility (FL), and Critical Thinking (CT) (Matsumoto et al., 2001). These findings provided support for our theoretical formulation in which the importance of ER, OP, CT, and FL are the key psychological ingredients to intercultural adaptation. These skills were hypothesized as necessary in allowing immigrants and sojourners to cope with stress and conflict that are inevitable in intercultural sojourns, while at the same time allowing for personal growth in understanding, tolerance, and acceptance of cultural differences.

To obtain further support for the validity of these four psychological skills to predict adjustment, we created scores for each of these scales and computed correlations between them and various adjustment variables across the studies conducted to determine which psychological constructs predicted adjustment. Table 2 summarizes the findings. The first column indicates the ICAPS scales that were significantly associated with the adjustment measures described in the second column. Individuals who scored high on the ICAPS scales had less adjustment problems at work, home, during spare time, and in family domains; less somatic, cognitive, and behavioral anxiety; less depression; greater subjective well-being in their adjustment to the US or another country; greater subjective adjustment; higher dyadic adjustments in international marriages; higher life satisfaction; less psychopathology; less culture shock and homesickness; higher language scores; better grades; more tendency to work; higher income; and many of the skills that are useful to managers in solving the complex problems of running a business. The correlations with the various adjustment outcomes provided strong support for this conglomeration of skills to predict adjustment.

Conceptually we suggested that ER was a gatekeeper skill because it is necessary for people to manage inevitable intercultural conflict and that once emotions were regulated individuals could engage in critical thinking and assimilation of new cognitive schemas that aid in adjustment. Various outcomes across all studies supported this contention because, as shown in Table 2, ER predicted most of the adjustment measures relative to the other ICAPS scales. In addition, hierarchical multiple regressions indicated that ER accounted for most of the variance in various adjustment outcomes when entered first in the regression; the additional variance accounted for by OP, FL, and CT was always negligible (Matsumoto et al., 2003).

At the same time the strong findings for ER do not argue against the importance of OP, FL, and CT. Theoretically these skills make sense in understanding intercultural adjustment. Thinking out of the box and examining rival hypotheses to understand uncommon behavior, which is necessary in intercultural adjustment, cannot occur without CT. Assimilation of new cognitive schemas of the world cannot occur without OP and FL. That the empirical relationships of these factors to adjustment indices were not as strong as that for ER may be related to their factor order and lower proportion of variance accounted for relative to ER. Despite this fact these scales still emerged with significant betas in a number of the regression analyses including ER, demonstrating their predictive utility.

#### *Personality Traits Associated with Intercultural Adjustment Potential*

In our previous studies we also examined correlations between each of the ICAPS scores with personality dimensions (Table 3). The ICAPS scores converge with a number of personality dimensions. For example, correlations with the personality traits of the Five Factor Model (Matsumoto et al., 2004) indicated that ER was correlated with Neuroticism, which measures a person's inability to regulate emotion in a normal fashion (Costa and McCrae, 1992). OP was correlated with Openness because it was constructed to be similar to Openness as measured in tests of the big five dimensions of personality. FL was negatively correlated with Conscientiousness because persons in the high ranges of Conscientiousness are characterized by rigidity in behavior and thought.

The ICAPS scores were also correlated with other personality traits. ER was correlated with the social ascendancy scales of the CPI as those are indicators of positive social skills and abilities. ER was also correlated with CPI Realization as it is associated with success in life, and negatively with Internality because it measures a tendency to withdraw from active involvement with the social world. ER was also correlated with the normative behavior scales of the CPI as most of these scales are indicative of internal organization, which leads to successful coping with one's culture of origin. ER and CT were associated with CPI scales measuring achievement and ability as these are aspects of successful coping, and self application requiring self-discipline and the ability to think critically, which are aspects of what we believe those parts of ICAPS measure. Finally ER, OP, and CT were positively correlated with CPI Psychological Mindedness as it predicts the dispassionate ability to analyze social situations and the mental processes required to cope in general, control one's own emotions, an openness to the various attributes of self, others and unique situations, as well as a capacity to think critically. These correlations provide a fairly comprehensive picture of the personality skills related to intercultural adjustment.

### *More Recent Research from our Laboratory*

One of the most recent studies from our laboratory replicated and extended our previous findings, highlighting the importance of ER to intercultural adjustment. In this study 63 international students attending San Francisco State University participated (19 males and 44 females; Mean age = 25.29 years,  $SD = 4.97$ ). They had been in the US an average of 8.22 months, and had previously been in the US an average of 4.41 months. Their self-rated proficiency in speaking, writing and reading English were all above fair ( $M = 4.65$ ,  $SD = 1.73$ ;  $M = 4.55$ ,  $SD = 1.65$ ; and  $M = 5.06$ ,  $SD = 1.62$  respectively on a 1 to 7 scale, 1 *poor* and 7 *fluent*), and their mean TOEFL score was 257.93 ( $SD = 110.72$ ) out of 300. At the beginning of the fall semester, they completed the ICAPS, the Neuroticism scale from the Big Five Inventory (John, 1989), and a measure of emotion recognition ability (the Japanese and Caucasian Brief Affect Recognition Test – JACBART) (Matsumoto et al., 2000). They also completed the following adjustment measures: the Beck Anxiety Inventory (BAI) (Beck and Steer, 1993), the Beck Depression Inventory II (BDI-II) (Beck, Steer, and Brown, 1996), the Beck Hopelessness Scale (BHS) (Beck and Steer, 1988), the Culture Shock Questionnaire (CSQ) (Mumford, 1998), the Homesickness and Contentment Scale (HC) (Shin and Abell, 1999), and the Satisfaction with Life (SWLS) (Diener, Emmons, Larsen, and Griffin, 1985). At the end of the school year approximately 9 months later, they completed the same battery of scales ( $n = 31$ ).

In order to examine whether ER could predict adjustment at the first data collection, we computed correlations between the ER scale of the ICAPS and the adjustment variables. As can be seen in Table 4, ER was highly and significantly correlated with all adjustment variables. Individuals with higher ER scores had less anxiety, culture shock, depression, homesickness, and hopelessness, and more contentment and satisfaction with life. Moreover each of these relationships were observed when the ICAPS ER scale at time 1 was correlated with these adjustment variables at time 2, 9 months later, and when demographic variables were controlled. The correlations with time 2 adjustment variables also survived when the same variable's time 1 levels were controlled (Yoo and Matsumoto, in preparation). Individual differences in ER, therefore, predicted adjustment concurrently, and considerably well into the future as well.

### *Studies Using the ICAPS by Other Laboratories*

Findings documenting the validity of the ICAPS to predict adjustment have also been reported by other laboratories. For instance Savicki et al. (in press) investigated actual and potential intercultural adjustment using the ICAPS. His purpose was four fold: (1) To compare ICAPS and adjustment scores of study abroad students (SA) with those of students who stay at home (Home) at the beginning and the end of the study abroad semester; (2) To examine whether ICAPS scores of SA at pre-departure predict adjustment at the end of the foreign culture sojourn; (3) To examine whether ICAPS and personal adjustment scores of SA increase over their stay in a foreign culture; and (4) to examine whether ICAPS and personal adjustment are related to personality characteristics and preferred coping strategies.

A group of 19 students from an American university who studied abroad for three months (SA) were matched with 46 students who stayed in the U.S. during the same semester (Home).

The groups were matched for age (19 to 25, with 83% in the 20-22 range), gender (54% women), and class standing (all juniors and seniors). They completed ICAPS, the Satisfaction with Life Scale (SWLS), a Five Factor Personality Questionnaire, the Life Orientation Test (LOT), and scales assessing Hope and Coping. SA students' voluntary participation was requested at four points in time: within one month prior to departure for their study abroad experience, during the beginning, middle, and end of the academic term of the study abroad experience.

The results indicated that the SA group was higher than Home students on ICAPS total, ER, and SWLS at the beginning of the semester, and on ER, CT, and SWLS at the end of the semester (Savicki et al., in press). ICAPS total and ER predicted higher personal adjustment approximately four months later at the end of the academic term in the SA group. This finding supported the predictive validity of the ICAPS-55 total score and the notion that ER may be a "gatekeeper" for intercultural adjustment potential (Matsumoto et al., 2001). As to the changes in the SA group, FL and SWLS increased at a statistically significant level between pre-departure and the end of the term.

Finally, a similar pattern of correlations appeared for the ICAPS-55 and ER with personality and coping variables (Savicki et al., in press). Those who had higher ICAPS-55 and ER scores were outgoing, open to new experiences, positive in outlook, and hopeful of one's abilities and of potential outcomes. In addition, they applied specific strategies of dealing with stress that focused on actively planning and carrying out actions to directly reduce stress, as well as developing a positive framework for stressful situations. They were also less anxious, less negative in their outlook, less likely to ignore or withdraw from unpleasant events in the foreign culture. These findings were especially important because they were generated by researchers outside of our laboratory, and they, too, demonstrated the significance of the ICAPS in intercultural adjustment.

### **Cultural Differences in Emotion Regulation**

The research reviewed above has clearly shown that ER is one of the most important skills necessary for intra- and intercultural adjustment. Given that there are clear individual differences in ER (Gross, 1999, 2002; Gross and John, 2003), one question that arises concerns whether or not there are cultural differences in ER. This is an interesting possibility that raises questions not only about intercultural encounters, but about the origins of such skills.

In fact there are a number of previous studies that suggest that there are quite substantial cultural differences in ER. The earliest systematic cross-cultural data that points in this direction is Hofstede's seminal study on work-related values. In that research (Hofstede, 2001; Hofstede and Bond, 1984; Hofstede, 1980) employees at International Business Machines (IBM), a multinational corporation with branch offices and subsidiaries in many different countries, completed a 160 item questionnaire; 63 were related to work values. Altogether, more than 116,000 questionnaires were distributed to workers in approximately 50 countries, spanning upwards of 20 different languages and including seven different occupational levels. Based on a country level factor analysis Hofstede identified four dimensions of cultural variability: Power Distance, Uncertainty Avoidance, Individualism, and Masculinity. Of these Uncertainty Avoidance is probably linked to emotion regulation. Uncertainty Avoidance (UA) is defined as

the degree to which people feel threatened by the unknown or ambiguous situations, and have developed beliefs, institutions, or rituals to avoid them. In this sense, cultures high on UA are most likely characterized by low levels of emotion regulation, while cultures low on UA have high levels. Individuals high on ER would tend to feel less threatened by unknown or ambiguous situations, and would be able to deal with such situations more constructively than those with low ER, as discussed throughout this chapter. In Hofstede's study, the three countries highest on UA were Greece, Portugal, and Guatemala; the three lowest were Denmark, Hong Kong, and Sweden.

Another source of information concerning cultural differences in ER comes from McCrae's multinational study of the five factor model of personality (Allik and McCrae, 2004, in press; McCrae, 2002; McCrae, Costa, del Pilar, Rolland, and Parker, 1998). In these studies McCrae and his colleagues have used their Revised NEO-Personality Inventory (NEO-PI-R) (Costa and McCrae, 1992), a 240 item questionnaire that measures the five personality traits considered to be universal: Extraversion, Openness, Agreeableness, Conscientiousness, and Neuroticism. To date McCrae has reported data on this measure from 36 samples in 32 countries involving both college students and adults (McCrae, 2002). Although data are collected from individuals, means on the various facet scores were computed for each sample. Results have indicated that the FFM replicates on the national level as well as the individual (McCrae, 2001; McCrae, 2002). Based on these results McCrae has computed country-level means for each of the five factors (and their facets) for each of the countries studied. Country scores on Neuroticism probably reflect mean levels of ER. Neuroticism is typically defined as emotional lability, and thus high scores on Neuroticism probably reflect low scores on emotion regulation; low scores on Neuroticism probably reflect high ER. In McCrae's study, the three countries that scored highest on Neuroticism were Portugal, Italy, and Spain; the three lowest were Sweden, Denmark, and Norway.

The notion that Hofstede's UA and McCrae's Neuroticism are related to each other received empirical support from a study that correlated the two. Hofstede and McCrae (2004) computed country-level correlations between their respective culture and personality scores. UA was correlated with Neuroticism 0.58 (and negatively with Agreeableness -0.55), suggesting that these dimensions share a common denominator. We suggest that one common denominator is ER.

One of the limitations of using the Hofstede and McCrae data to estimate cultural differences on ER is that neither of them intended to measure ER directly. The ICAPS described earlier in this chapter, however, does, and our current normative database includes data from approximately 11,000 individuals around the world. We computed an exploratory factor analysis on these data, after doubly standardizing both within individuals and countries in order to eliminate positioning effects and to produce a pancultural solution (Leung and Bond, 1989). As mentioned previously, the first factor to emerge in these analyses was ER. We then created scale scores on the raw data using the highest loading items on this factor (11 items), and computed means on this scale for each country represented in the data set. (Respondents rate each item on a 7-point scale; means therefore range from 1-7.) Like the Hofstede and McCrae data sets, these data (Table 5) also demonstrate considerable variability across cultures on ER. The three



countries with the highest ICAPS ER scores were Sweden, Norway, and Finland; the three lowest were Japan, Malaysia, and China.

To examine whether the ICAPS ER scores were empirically related to Hofstede's UA and McCrae's Neuroticism, we computed country-level correlations between them. ICAPS ER was marginally negatively correlated with UA,  $r(47) = -.20$ ,  $p < .10$ , indicating those countries with higher ER scores had lower UA scores, as expected. ICAPS ER was also negatively correlated with Neuroticism,  $r(29) = -.49$ ,  $p < .01$ , indicating that countries with higher ER scores had lower Neuroticism scores, as expected.

Several other studies have measured ER or concepts related to it across cultures, and provide further hints as to its cultural variability. Matsumoto and his colleagues (2003), for instance, reported two studies in which they administered the Emotion Regulation Questionnaire (Gross and John, 2003), a ten item scale that produces scores on two subscales, Reappraisal and Suppression. Americans had significantly higher scores than the Japanese on Reappraisal, while the Japanese had significantly higher scores on Suppression. In that same report, the Americans also had significantly higher scores than the Japanese on the ICAPS ER scale, while the Japanese had significantly higher scores on the Neuroticism scale of the NEO-PI-R. These findings converge with the country listing of ICAPS ER scores described above.

Finally a number of studies have documented cultural differences in display rules (Ekman and Friesen, 1969). These are rules learned early in life that govern the modification of emotional displays as a function of social circumstance. Display rules are related to ER because they concern the management and modification of the expressive component of emotion. The first study to document the existence of display rules was Ekman and Friesen's classic study involving American and Japanese participants viewing highly stressful films in two conditions while being videotaped (Ekman, 1972; Friesen, 1972). When viewing the stimuli alone, both American and Japanese observers showed the same emotions in their faces; when in the presence of a higher status experimenter, however, cultural differences emerged. While the Americans continued to show their facial signs of negative emotions, Japanese observers were more likely to mask their negative feelings with smiles.

Subsequent cross-cultural research has continued to document cultural differences in display rules. Elsewhere we (Biehl, Matsumoto, and Kasri, in press; Matsumoto, 1990) demonstrated how Japanese, Hungarians, and Poles tended to deamplify negative emotions to ingroup members but amplify positive ones relative to Americans; they also amplify negative emotions to outgroups and minimize positive ones. We have also documented display rule differences between the US, Russia, South Korea, and Japan (Matsumoto et al., 1998). In our latest research we have provided empirical evidence for the psychometric properties of the first individual difference measure of display rules that assesses various behavioral tendencies beyond the expression-suppression distinction, showing that individuals can modify their expressions by amplification, deamplification, neutralizing, masking, or qualifying their feelings (Matsumoto et al., in press); in that same article we reported differences among the US, Japan, and Russia on that measure. We have also documented differences in display rules across different ethnic groups in the US (Matsumoto, 1993).

Presumably other rules or similar types of mechanisms exist for other emotion components. Hochschild (2001), for instance, has proposed the concept of feeling rules, which concern the regulation of the experiential component of emotion. Gross suggests individuals can regulate their emotions by altering the antecedents that bring forth emotion (selecting or modifying situations, altering attention, or changing cognitions) and the behavioral and physiological responses related to emotion (Gross, 1998, 1999, 1999, 2002; Gross and John, 2003; Gross and Levenson, 1993). Cross-cultural studies on these concepts are necessary to examine possible cultural differences on them as well.

### **Conclusion**

Communication is a rich and complex process that involves multiple messages sent via multiple signal systems. Culture has a pervasive influence on the encoding of both verbal and nonverbal signals, and the decoding of those signals. Because of this influence, conflict and misunderstanding is inevitable in intercultural communication. The key to successful intercultural communication is the engagement of a personal growth process model focusing on ER, critical thinking, and openness and flexibility, where one's worldview is constantly being updated by the new and exciting cultural differences with which we engage in our everyday lives. The gatekeeper of this process is the ability to regulate our emotional reactions. If we can do so, then the increasing cultural diversity of the world is an exciting research laboratory, where we can constantly test our hypotheses, explore new hypotheses, throw out theories that don't work, and create theories that do. In this fashion, the challenge of cultural diversity and intercultural conflicts is a stage for forging new relationships, new ideas, and new people. It is a model for intercultural success for those individuals who can engage in these processes. We call these individuals "Voyagers," because to them, life is an enjoyable journey.

Those people who cannot control their emotions reinforce and crystallize their pre-existing ethnocentric and stereotypic ways of dealing with the world that are limited. This is a no growth model, and these individuals are not engaged in a journey. This is a model of stagnation, with no growth potential inherent in such a process. We call these people "Vindicators," because their worldviews are established solely to vindicate their pre-existing ethnocentrism and stereotypes, not to challenge them and grow.

The world of the voyager is neither a panacea nor utopia. These processes do not ensure that we will all live happily ever after, and enjoy and like all cultural differences we come into contact with. After critically thinking about an episode or event, one might indeed come to the conclusion that someone is morally wrong, or just plain rude or selfish. Understanding the differences and appreciating their origin and meaning to other's lives does not mean that one has to like those differences, or accept them for oneself. What is important are not the conclusions we arrive at, but the process by which we arrive at them. The distinction between voyagers and vindicators is not solely in their conclusions, but in the processes they engage to draw their conclusions.

The information we have provided is a blend of theory and research from communication and psychology. We believe that our views on the role of emotion, critical thinking, and openness in effective intercultural communication are unique, filling an important void in our

understanding of the development of ICC and fostering positive intercultural adjustment outcomes. While many models of ICC have focused on cognitive aspects of communication, we focus on the emotional aspects of conflict resolution. Indeed, we believe that no matter how complex or advanced our cognitive understanding of culture and communication are, this understanding does no good if we cannot regulate emotions that inevitably occur in intercultural communication episodes. We sincerely hope readers leave this chapter as a voyager and not as a vindicator, and use this knowledge and information not only in their academic work, but also in their own, everyday, personal lives.

## References

- Abel, T., & Kandel, E. (1998). Positive and negative regulatory mechanisms that mediate long-term memory storage. *Brain Research Reviews*, 26(2-3), 360-378.
- Allik, J., & McCrae, R. R. (2004). Towards a Geography of Personality Traits: Patterns of Profiles Across 36 Cultures. *Journal of Cross-Cultural Psychology*, 35, 13-28.
- Allik, J., & McCrae, R. R. (in press). Towards a Geography of Personality Traits: Patterns of Profiles Across 36 Cultures. *Journal of Cross-Cultural Psychology*.
- Au, T. K. (1983). Chinese and English counterfactuals: The Sapir-Whorf Hypothesis revisited. *Cognition*, 15(1-3), 155-187.
- Babiker, I. E., Cox, J. L., & Miller, P. M. (1980). The measurement of cultural distance and its relationship to medical consultations, symptomatology and examination of performance of overseas students at Edinburgh University. *Social Psychiatry*, 15, 109-116.
- Barnlund, D., & Araki, S. (1985). Intercultural encounters: The management of compliments by Japanese and Americans. *Journal of Cross-Cultural Psychology*, 16(1), 9-26.
- Barnlund, D., & Yoshioka, M. (1990). Apologies: Japanese and American styles. *International Journal of Intercultural Relations*, 14, 193-206.
- Beck, A. T., & Steer, R. A. (1988). *Beck Hopelessness Scale*. San Antonio, TX: The Psychological Corporation.
- Beck, A. T., & Steer, R. A. (1993). *Beck Anxiety Inventory*. San Antonio, TX: The Psychological Corporation.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II: Beck Depression Inventory Manual (2nd ed.)*. San Antonio, TX: The Psychological Corporation.
- Berlin, B., & Kay, P. (1969). *Basic color terms: Their universality and evolution*. Berkeley, CA: Universality of California Press.
- Berry, J. W., Kim, U., & Boski, P. (1988). Psychological acculturation of immigrants. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Cross-cultural adaptation: Current approaches. International and intercultural communication annual* (Vol. 11, pp. 62-89). Newbury Park, CA: Sage.
- Berry, J. W., & Sam, D. (1997). Acculturation and adaptation. In J. W. Berry & M. H. Segall & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology, Vol 3: Social and behavioral applications*. Boston, MA: Allyn and Bacon.
- Biehl, M., Matsumoto, D., & Kasri, F. (in press). Culture and emotion. In U. Gielen & A. L. Communian (Eds.), *Cross-cultural and international dimensions of psychology*. Trieste, Italy: Edizioni Lint Trieste S.r.l.
- Black, J. S., & Stephens, G. K. (1989). The influence of the spouse on American expatriate adjustment and intent to stay in Pacific Rim overseas assignments. *Journal of Management*, 15(4), 529-544.
- Bloom, L. (1981). The importance of language for language development: Linguistic determinism in the 1980's. *Annals of the New York Academy of Sciences*, 379, 160-171.
- Brislin, R. (1993). *Understanding culture's influence on behavior*. Fort Worth, TX: Harcourt Brace Jovanovich.
- Buck, R. W. (1984). *The communication of emotion*. New York: Guilford Press.
- Carstensen, L. L., Gottman, J. M., & Levenson, R. W. (1995). Emotional behavior in long-term marriage. *Psychology & Aging*, 10(1), 140-149.

- Chen, G. M. (1995). Differences in self-disclosure patterns among Americans versus Chinese: A comparative study. *Journal of Cross-Cultural Psychology*, 26(1), 84-91.
- Costa, P. T., & McCrae, R. R. (1992). *Revised Neo-Personality Inventory (NEO-PI-R) and Neo Five Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.
- Cowan, P. A. (1978). *Piaget: with feeling: cognitive, social, and emotional dimensions*. New York: Holt Rinehart and Winston.
- Dasen, P. R. (1976). *Piagetian psychology: cross cultural contributions*. New York: Gardner Press: distributed by Halsted Press.
- Davies, I. R. L., Sowden, P. T., Jerrett, D. T., Jerrett, T., & Corbett, G. G. (1998). A cross-cultural study of English and Setswana speakers on a colour triads task: A test of the Sapir-Whorf hypothesis. *British Journal of Psychology*, 89(1), 1-15.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Ekman, P. (1972). Universal and cultural differences in facial expression of emotion. In J. R. Cole (Ed.), *Nebraska Symposium on Motivation, 1971* (pp. 207-283). Lincoln, NE: Nebraska University Press.
- Ekman, P., & Friesen, W. (1969). The repertoire of nonverbal behavior: Categories, origins, usage, and coding. *Semiotica*, 1, 49-98.
- Ervin, S. (1964). Language and TAT content in bilinguals. *Journal of Abnormal and Social Psychology*, 68, 500-507.
- Fehr, B. J., & Exline, R. V. (1987). Social visual interactions: A conceptual and literature review. In A. W. Siegman & S. Feldstein (Eds.), *Nonverbal behavior and communication* (Vol. 2nd, pp. 225-326). Hillsdale, NJ: Lawrence Erlbaum.
- Friesen, W. V. (1972). *Cultural differences in facial expressions in a social situation: An experimental test of the concept of display rules*. Unpublished Doctoral dissertation, University of California, San Francisco.
- Furukawa, T., & Shibayama, T. (1995). Factors including adjustment of high school students in an international exchange program. *Journal of Nervous and Mental Disease*, 182(12), 709-714.
- Gao, G., & Gudykunst, W. (1991). Uncertainty, anxiety, and adaptation. *International Journal of Intercultural Relations*, 14(3), 301-317.
- Garro, L. C. (1986). Language, memory, and focality: A reexamination. *American Anthropologist*, 88(1), 128-136.
- Gottman, J. M., & Levenson, R. W. (1986). Assessing the role of emotion in marriage. *Behavioral Assessment*, 8(1), 31-48.
- Gottman, J. M., & Levenson, R. W. (1992). Marital processes predictive of later dissolution: Behavior, physiology, and health. *Journal of Personality and Social Psychology*, 63(2), 221-223.
- Gottman, J. M., & Levenson, R. W. (1999). Rebound from marital conflict and divorce prediction. *Family Process*, 38(3), 287-292.
- Gottman, J. M., & Levenson, R. W. (2000). The timing of divorce: Predicting when a couple will divorce over a 14-year period. *Journal of Marriage & the Family*, 62(3), 737-745.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271-299.
- Gross, J. J. (1999). Emotion and Emotion Regulation. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2 ed., pp. 525-552). New York: Guilford.

- Gross, J. J. (1999). Emotion Regulation: Past, Present, Future. *Cognition & Emotion*, 13(5), 551-573.
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39, 281-291.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362.
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology*, 64(6), 970-986.
- Gudykunst, W., Hammer, M. R., & Wiseman, R. (1977). An analysis of an integrated approach to cross-cultural training. *International Journal of Intercultural Relations*, 1(2), 99-110.
- Gudykunst, W., & Kim, Y. Y. (1984). *Communicating with strangers: An approach to intercultural communication*. New York: McGraw Hill.
- Gudykunst, W., & Mody, B. (2001). *Handbook of international and intercultural communication*. Newbury Park, CA: Sage.
- Gudykunst, W., & Nishida, T. (1986). Attributional confidence in low and high context cultures. *Human Communication Research*, 12(4), 525-549.
- Gudykunst, W., & Nishida, T. (2001). Anxiety, uncertainty, and perceived effectiveness of communication across relationships and cultures. *International Journal of Intercultural Relations*, 25(1), 55-71.
- Gudykunst, W. B., Gao, G., Schmidt, K. L., Nishida, T., Bond, M., Leung, K., Wang, G., & Barraclough, R. A. (1992). The influence of individualism-collectivism, self-monitoring, and predicted-outcome value on communication in ingroup and outgroup relationships. *Journal of Cross-Cultural Psychology*, 23, 196-213.
- Gudykunst, W. B., Nishida, T., & Chua, E. (1986). Uncertainty reduction in Japanese-North American dyads. *Communication Research Reports*, 3, 39-46.
- Gudykunst, W. B., Yang, S.-m., & Nishida, T. (1985). A cross-cultural test of uncertainty reduction theory: Comparisons of acquaintances, friends, and dating relationships in Japan, Korea, and the United States. *Human Communication Research*, 11(3), 407-455.
- Gudykunst, W. B., Yoon, Y., & Nishida, T. (1987). The influence of individualism-collectivism on perceptions of communication in ingroup and outgroup relationships. *Communication Monographs*, 54(3), 295-306.
- Hall, E. T. (1966). *The hidden dimension*. New York: Doubleday.
- Hall, E. T. (1973). *The silent language*. New York: Anchor.
- Hochschild, A. (2001). Emotion work, feeling rules, and social structure. In A. Branaman (Ed.), *Self and society* (pp. 138-155). Malden, MA: Blackwell Publishers.
- Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Hofstede, G., & Bond, M. (1984). Hofstede's cultural dimensions: An independent validation using Rokeach's Value Survey. *Journal of Cross-Cultural Psychology*, 15(4), 417-433.
- Hofstede, G. H. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage Publications.
- Hofstede, G. H., & McCrae, R. R. (2004). Personality and Culture Revisited: Linking Traits and Dimensions of Culture. *Cross-Cultural Research*, 38(1), 52-88.

- Hoosain, R. (1986). Language, orthography and cognitive processes: Chinese perspectives for the Sapir Whorf hypothesis. *International Journal of Behavioral Development*, 9(4), 507-525.
- Hoosain, R. (1991). *Psycholinguistic implications for linguistic relativity: A case study of Chinese*. Hillsdale, NJ: Lawrence Erlbaum, and Associates.
- Hull, P. (1987). *Bilingualism: Two languages, two personalities?* Ann Arbor, MI: University of Michigan Press.
- John, O. (1989). The BFI-54. Unpublished test, Institute of Personality and Social Research, Department of Psychology, University of California, Berkeley.
- Kamal, A. A., & Maruyama, G. (1990). cross-cultural contact and attitudes of Qatari students in the United States. *International Journal of Intercultural Relations*, 14, 123-134.
- Kashima, E. S., & Kashima, Y. (1998). Culture and language: The case of cultural dimensions and personal pronoun use. *Journal of Cross-Cultural Psychology*, 29, 461-486.
- Kay, P., & Kempton, W. (1984). What is the Sapir-Whorf hypothesis? *American Anthropologist*, 86(1), 65-79.
- Kim, M. S., Hunter, J. E., Miyahara, A., Horvath, A. M., Bresnahan, M., & Yoon, H. J. (1996). Individual vs. culture-level dimensions of individualism and collectivism: Effects on preferred conversation styles. *Communication Monographs*, 63, 29-49.
- Kudoh, T., & Matsumoto, D. (1985). Cross-cultural examination of the semantic dimensions of body postures. *Journal of Personality & Social Psychology*, 48(6), 1440-1446.
- Leung, K., & Bond, M. (1989). On the empirical identification of dimensions for cross-cultural comparisons. *Journal of Cross-Cultural Psychology*, 20(2), 133-151.
- Levenson, R. W., & Gottman, J. M. (1983). Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology*, 45(3), 587-597.
- Littlejohn, S. W., & Jabusch, D. M. (1982). Communication competence: A model and application. *Journal of Applied Communication Research*, 10, 29-37.
- Matsumoto, D. (1990). Cultural similarities and differences in display rules. *Motivation & Emotion*, 14(3), 195-214.
- Matsumoto, D. (1993). Ethnic differences in affect intensity, emotion judgments, display rule attitudes, and self-reported emotional expression in an American sample. *Motivation & Emotion*, 17(2), 107-123.
- Matsumoto, D. (2001). Culture and Emotion. In D. Matsumoto (Ed.), *The Handbook of Culture and Psychology* (pp. 171-194). New York: Oxford University Press.
- Matsumoto, D., & Assar, M. (1992). The effects of language on judgments of universal facial expressions of emotion. *Journal of Nonverbal Behavior*, 16(2), 85-99.
- Matsumoto, D., Choi, J. W., Hirayama, S., Domae, A., & Yamaguchi, S. (2003). Culture, display rules, emotion regulation, and emotion judgments. *Manuscript currently submitted for publication*.
- Matsumoto, D., & Kudoh, T. (1987). Cultural similarities and differences in the semantic dimensions of body postures. *Journal of Nonverbal Behavior*, 11(3), 166-179.
- Matsumoto, D., LeRoux, J. A., Bernhard, R., & Gray, H. (2004). Personality and behavioral correlates of intercultural adjustment potential. *International Journal of Intercultural Relations*, 28(3-4), 281-309.
- Matsumoto, D., LeRoux, J. A., Iwamoto, M., Choi, J. W., Rogers, D., Tatani, H., & Uchida, H. (2003). The robustness of the Intercultural Adjustment Potential Scale (ICAPS). *International Journal of Intercultural Relations*, 27, 543-562.

- Matsumoto, D., LeRoux, J. A., Ratzlaff, C., Tatani, H., Uchida, H., Kim, C., & Araki, S. (2001). Development and validation of a measure of intercultural adjustment potential in Japanese sojourners: The Intercultural Adjustment Potential Scale (ICAPS). *International Journal of Intercultural Relations*, 25, 483-510.
- Matsumoto, D., LeRoux, J. A., Wilson-Cohn, C., Raroque, J., Kooken, K., Ekman, P., Yrizarry, N., Loewinger, S., Uchida, H., Yee, A., Amo, L., & Goh, A. (2000). A new test to measure emotion recognition ability: Matsumoto and Ekman's Japanese and Caucasian Brief Affect Recognition Test (JACBART). *Journal of Nonverbal Behavior*, 24(3), 179-209.
- Matsumoto, D., Takeuchi, S., Andayani, S., Kouznetsova, N., & Krupp, D. (1998). The contribution of individualism-collectivism to cross-national differences in display rules. *Asian Journal of Social Psychology*, 1, 147-165.
- Matsumoto, D., Yoo, S. H., Hirayama, S., & Petrova, G. (in press). Validation of an Individual-Level Measure of Display Rules: The Display Rule Assessment Inventory (DRAI). *Emotion*.
- McCrae, R. R. (2001). Trait psychology and culture: Exploring intercultural comparisons. *Journal of Personality*, 69(6), 819-846.
- McCrae, R. R. (2002). NEO-PI-R data from 36 cultures: Further intercultural comparisons. In R. McCrae & J. Allik (Eds.), *The Five-Factor Model of personality across cultures* (pp. 105-125). New York: Kluwer Academic/Plenum Publishers.
- McCrae, R. R., Costa, P. T., del Pilar, G. H., Rolland, J.-P., & Parker, W. D. (1998). Cross-cultural assessment of the five-factor model: The revised NEO Personality Inventory. *Journal of Cross-Cultural Psychology*, 29(1), 171-188.
- Minami, M., & McCabe, A. (1995). Rice balls and bear hunts: Japanese and North American family narrative patterns. *Journal of Child Language*, 22(2), 423-445.
- Montagliani, A., & Giacalone, R. A. (1998). Impression management and cross-cultural adaptation. *Journal of Social Psychology*, 138(5), 598-608.
- Morris, D., Collett, P., Marsh, P., & O'Shaughnessy, M. (1980). *Gestures: Their origins and distribution*. New York: Scarborough.
- Mumford, D. B. (1998). The measurement of culture shock. *Social Psychiatry and Psychiatric Epidemiology*, 33, 149-154.
- Niyekawa-Howard, A. M. (1968). *A study of second language learning: The influence of first language on perception, cognition, and second language learning: A test of the Whorfian hypothesis*. Washington, D. C.: US Department of Health, Education, and Welfare, Office of Education, Bureau of Research.
- Nomura, N., & Barnlund, D. (1983). Patterns of interpersonal criticism in Japan and the United States. *International Journal of Intercultural Relations*, 7(1), 1-18.
- Okazaki-Luff, K. (1991). On the adjustment of Japanese sojourners: Beliefs, contentions, and empirical findings. *International Journal of Intercultural Relations*, 15(1), 85-102.
- Pederson, P. (1995). *The five stages of culture shock: Critical incidents around the world*. Westwood, CT: Greenwood Press.
- Piaget, J. (1952). *The origins of intelligence in children*. London, England: International Universities Press.
- Piaget, J., & Campbell, S. F. (1976). *Piaget sampler: an introduction to Jean Piaget through his own words*. New York: Wiley.



- Piaget, J., Elkind, D., & Flavell, J. H. (1969). *Studies in cognitive development; essays in honor of Jean Piaget*. New York: Oxford University Press.
- Piaget, J., Gruber, H. E., & Vonèche, J. (1977). *The essential Piaget*. New York: Basic Books.
- Powers, W., & Lowery, D. (1984). Basic communication fidelity. In R. Bostrom (Ed.), *Competence in communication*. Beverly Hills, CA: Sage.
- Rosch, E. H., & Lloyd, B. B. (1978). *Cognition and categorization*. Hillsdale, NJ: Lawrence Erlbaum.
- Rudmin, F. (2003). Critical history of the acculturation psychology of assimilation, separation, integration, and marginalization. *Review of General Psychology*, 7(1), 3-37.
- Rudmin, F. (2003). "Critical history of the acculturation psychology of assimilation, separation, integration, and marginalization": Correction to Rudmin (2003). *Review of General Psychology*, 7(3), 250.
- Samovar, L. A., & Porter, R. E. (1995). *Communication between cultures*. Belmont, CA: Wadsworth.
- Savicki, V., Downing-Burnette, R., Heller, L., Binder, F., & Suntinger, W. (in press). Contrasts, Changes, and Correlates in Actual and Potential Intercultural Adjustment. *International Journal of Intercultural Relations*.
- Shin, H., & Abell, N. (1999). The homesickness and contentment scale: Developing a culturally sensitive measure of adjustment for Asians. *Research on Social Work Practice*, 9(1), 45-60.
- Stigler, J. W., & Baranes, R. (1988). Culture and mathematics learning. In E. Rothkopf (Ed.), *Review of research in education* (Vol. 15, pp. 253-306). Washington, D. C.: American Educational Research Association.
- Stone Feinstein, E., & Ward, C. (1990). Loneliness and psychological adjustment of sojourners: New perspectives on culture shock. In D. Keats & D. Munro & L. Mann (Eds.), *Heterogeneity in cross-cultural psychology* (pp. 537-547). Lisse, Netherlands: Swets and Zeitlinger.
- Suzuki, T. (1978). *Japanese and the Japanese*. Tokyo: Kodansha.
- Tomkins, S. S. (1962). *Affect, imagery, and consciousness* (Vol. 1: The positive affects). New York: Springer.
- Tomkins, S. S. (1963). *Affect, imagery, and consciousness* (Vol. 2: The negative affects). New York: Springer.
- Vrij, A., & Winkel, F. W. (1991). Cultural patterns in Dutch and Surinam nonverbal behavior: An analysis of simulated police/citizen encounters. *Journal of Nonverbal Behavior*, 15(3), 169-184.
- Vrij, A., & Winkel, F. W. (1992). Cross-cultural police-citizen interactions: The influence of race, beliefs, and nonverbal communication on impression formation. *Journal of Applied Social Psychology*, 22(19), 1546-1559.
- Ward, C. (2001). The A, B, Cs of Acculturation. In D. Matsumoto (Ed.), *Handbook of Culture and Psychology* (pp. 411-446). New York: Oxford University Press.
- Watson, O. M. (1970). *Proxemic behavior: A cross-cultural study*. The Hague, Netherlands: Mouton.
- Watson, O. M., & Graves, T. D. (1966). Quantitative research in proxemic behavior. *American Anthropologist*, 68, 971-985.
- Wiseman, R., Hammer, M. R., & Nishida, H. (1989). Predictors of intercultural communication competence. *International Journal of Intercultural Relations*, 13(3), 349-370.

Yoo, S. H., & Matsumoto, D. (in preparation). Emotion regulation, emotion recognition, and intercultural adjustment. *Manuscript currently submitted for publication.*

Table 1  
Summary of Initial Validation Studies of the ICAPS

<b>Study</b>	<b>Scientific Issue Being Tested</b>	<b>What was Accomplished</b>	<b>Participants</b>	<b>Citation</b>
1	Item reduction; Predictive validity	The 193 items were correlated with indices of intercultural adjustment. The least important items were eliminated, resulting in a 153-item test.	Japanese international students	(Matsumoto et al., 2001)
2	Further item reduction; Predictive validity; Internal reliability	The items were correlated with indices of adjustment. The least important ones were eliminated, resulting in a 55-item test, which we call the ICAPS-55. Internal reliability of the final 55 items was established.	Japanese international students	
3	Temporal and parallel forms reliability	English and Japanese versions of the ICAPS-55 were found to be equivalent. Scores on the test were found to be consistent even after time has elapsed between administrations.	Japanese international students	
4	Predictive validity	The ICAPS-55 was correlated with a variety of measures of adjustment.	Japanese international students	
5	Construct validity; Discriminant validity; Incremental validity	The ICAPS-55 was correlated with a variety of personal and psychopathology measures.	American university students	
6	External validity	Changes in ICAPS-55 scores were associated with participation in an intercultural adjustment seminar.	Japanese exchange students	
7	Norming	Factor analyses of the ICAPS-55 confirmed the existence of the four primary factors of the psychological engine – ER, CT, OP, and FL.	Japanese and American students and non-students	
8	External validity	The ICAPS-55 was associated with a number of characteristics of this group of experts that differed from the norm data.	Japanese and non-Japanese intercultural counselors and consultants	

9	Predictive validity	The ICAPS-55 was correlated with a variety of measures of adjustment.	Japanese businesspersons and housewives	(Matsumoto et al., 2003)
10	External validity	Changes in the ICAPS-55 were associated with participation in an intercultural training seminar.	Japanese international students and full-time workers	
11	Predictive validity	The ICAPS-55 predicted marital and life satisfaction for the women in these marriages.	Japanese women in international marriages	
12	Predictive validity	The ICAPS-55 predicted culture shock, adjustment, and life satisfaction for these students even though the ICAPS was administered prior to their sojourn while the students were still in Japan.	Japanese international students	
13	Predictive validity	The ICAPS-55 predicted subjective adjustment for international sojourners from many different countries and cultures to the U.S. and Americans who have sojourned abroad.	Non-Japanese sojourners	
14	Predictive validity; Parallel forms reliability	The ICAPS-55 predicted subjective adjustment and life satisfaction in Spanish speaking immigrants and sojourners from Central and South America. English and Spanish versions of the test were found to be equivalent.	Central and South Americans	
15	Incremental validity	The ICAPS-55 predicted adjustment above and beyond that already accounted for by the big five personality dimensions.	American university students	(Matsumoto et al., 2004)
16	Convergent validity; Predictive validity; Incremental validity	The ICAPS-55 was correlated with a variety of personal and psychopathology measures, and predicted adjustment above and beyond that already accounted for by the CPI.	American university students	
17	Predictive validity	The ICAPS-55 predicted actual behaviors above and beyond that already predicted by emotion recognition.	American university students	

Table 2  
Adjustment Outcomes Predicted by the ICAPS Scales

<b>ICAPS factor</b>	<b>Adjustment Scale</b>	<b>Citation</b>	
Emotion Regulation	<b>Social Adjustment Scale Self-Report (SAS-SR)</b> Work, House work, Spare time, Family	(Matsumoto et al., 2003)	
	<b>Somatic, Cognitive, Behavioral Anxiety Scale (SCBAI)</b> Total score, Somatic, Cognitive, Behavioral		
	<b>Beck Depression Inventory II (BDI-II)</b>		
	<b>Subjective adjustment (SA)</b>		
	<b>Personal Opinion Questionnaire (POQ)</b>		
	<b>Dyadic Adjustment Scale (DAS)</b> Total score, Dyadic Consensus (DCON)		
	<b>Satisfaction with Life Scale (SWLS)</b>		
	<b>Measurement of Culture Shock (CS)</b> Total, Culture shock (CCS), Interpersonal stress items (IS)		
	<b>Homesickness and Contentment Scale (HS)</b>		
	<b>Language Score</b> Verbal communication skill, Text skill, Overall language skill		
	<b>GPA</b>		
	<b>Working or not</b>		
	<b>Income</b>		
	<b>Millon Clinical Multiaxial Inventory-II (MCMI-II)</b> Avoidant, Compulsive, Dependent, Histrionic, Narcissistic, Schizoid, Delusional, Debasement, Anxiety, Alcohol Dependence, Self-Defeating, Schizotypal, Passive-Aggressive, Borderline, Thought Disorder, Somatoform, Paranoid, Major Depression, Dysthymia		(Matsumoto et al., 2004)
<b>In-Basket</b> Quality of Decision, Decisiveness, Written Communication, Delegation, Goal Setting, Initiative, Total Score			
Openness	<b>Somatic, Cognitive, Behavioral Anxiety Scale (SCBAI)</b> Cognitive	(Matsumoto et al., 2003)	
	<b>Beck Depression Inventory II (BDI-II)</b>		
	<b>Subjective adjustment (SA)</b>		
	<b>Dyadic Adjustment Scale (DAS)</b> Dyadic Satisfaction (DS)		
	<b>Satisfaction with Life Scale (SWLS)</b>		
	<b>Measurement of Culture Shock (CS)</b> Total, Culture shock (CCS)		
	<b>Homesickness and Contentment Scale (HS)</b>		

	<b>Language Score</b> Text skill	(Matsumoto et al., 2003)
	<b>Millon Clinical Multiaxial Inventory-II (MCMI-II)</b> Aggressive, Avoidant, Schizoid, Delusional, Debasement, Anxiety, Schizotypal, Thought Disorder, Paranoid, Major Depression, Dysthymia	(Matsumoto et al., 2004)
	<b>In-Basket</b> Written Communication, Problem Analysis, Sensitivity, Initiative, Fact Finding, Total Score	
Flexibility	<b>Subjective adjustment (SA)</b> <b>Personal Opinion Questionnaire (POQ)</b>	(Matsumoto et al., 2003)
	<b>Dyadic Adjustment Scale (DAS)</b> Dyadic Satisfaction (DS), Affectional Expression (AE)	
	<b>Satisfaction with Life Scale (SWLS)</b>	
	<b>Language Score</b> Text skill, Overall language skill	
	<b>Income</b>	
	<b>Millon Clinical Multiaxial Inventory-II (MCMI-II)</b> Compulsive, Dependent, Histrionic, Desirability, Bipolar Manic	(Matsumoto et al., 2004)
Critical Thinking	<b>Social Adjustment Scale Self-Report (SAS-SR)</b> House work	(Matsumoto et al., 2003)
	<b>Dyadic Adjustment Scale (DAS)</b> Total score	
	<b>Satisfaction with Life Scale (SWLS)</b>	
	<b>GPA</b>	
	<b>Working or not</b>	
	<b>Millon Clinical Multiaxial Inventory-II (MCMI-II)</b> Aggressive, Antisocial, Histrionic, Narcissistic, Drug Dependence	(Matsumoto et al., 2004)
	<b>In-Basket</b> Sensitivity	

Table 3  
 Personality Dimensions Associated with the ICAPS Scales

<b>ICAPS factor</b>	<b>Personality Scale</b>	Citation
Emotion Regulation	<b>Big Five Inventory (BFI)</b> Extraversion, Agreeableness, Neuroticism	(Matsumoto et al., 2004)
	<b>California Personality Inventory (CPI)</b> Social Ascendancy Dominance, Capacity for status, Sociability, Social presence, Self-acceptance, Independence, Empathy Normative Behavior Tolerance, Sense of well-being, Communality, Responsibility, Socialization, Self-control, Good impression Achievement Achievement via Independence, Intellectual efficiency, Achievement via conformance Miscellaneous Flexibility, Psychological mindedness, Femininity (-) Factor Scores Internality (-), Realization	
	<b>Social Opinion Questionnaire (SOQ)</b> Altruism	
	<b>Myers-Briggs Type Indicator (MBTI)</b> Sensing-Intuition, Extroversion-Introversion	(Matsumoto et al., 2004)
Openness	<b>Big Five Inventory (BFI)</b> Extraversion, Agreeableness, Conscientiousness, Openness	
	<b>California Personality Inventory (CPI)</b> Social Ascendancy Dominance, Sociability, Social presence, Independence, Empathy Normative Behavior Sense of well-being, Socialization, Self-control, Good impression Achievement Achievement via conformance Miscellaneous Flexibility, Psychological mindedness, Femininity (-) Factor Scores Internality (-), Norm-favoring	
	<b>Social Opinion Questionnaire (SOQ)</b> Altruism (-)	
	<b>Myers-Briggs Type Indicator (MBTI)</b>	(Matsumoto et al., 2004)

Note: (-) indicates negative correlation.

	Sensing-Intuition, Extroversion-Introversion, Thinking-Feeling	et al., 2004)
Flexibility	<b>Big Five Inventory (BFI)</b> Extraversion (-), Agreeableness (-), Conscientiousness (-)	
	<b>California Personality Inventory (CPI)</b> Social Ascendancy Capacity for status, Social presence, Self-acceptance, Empathy Normative Behavior Communality, Responsibility, Socialization, Self-control Achievement Achievement via conformance Miscellaneous Flexibility, Psychological mindedness, Femininity Factor Scores Norm-favoring	
	<b>Myers-Briggs Type Indicator (MBTI)</b> Sensing-Intuition, Judging- Perceiving	
Critical Thinking	<b>Big Five Inventory (BFI)</b> Agreeableness	(Matsumoto et al., 2004)
	<b>California Personality Inventory (CPI)</b> Social Ascendancy Capacity for status Normative Behavior Tolerance, Sense of well-being, Communality, Responsibility, Socialization, Self-control, Good impression Achievement Achievement via Independence, Intellectual efficiency, Achievement via conformance Miscellaneous Flexibility, Psychological mindedness, <i>Factor Scores</i> Internality, Norm-favoring, Realization	
	<b>Social Opinion Questionnaire (SOQ)</b> Altruism	
	<b>Myers-Briggs Type Indicator (MBTI)</b> Sensing-Intuition, Extroversion-Introversion, Thinking-Feeling	



Table 4  
 Correlations Between ICAPS Emotion Regulation Scale and Adjustment Variables in  
 International Students Assessed at the Beginning (Time 1) and End (Time 2) of School Year

Adjustment Variable	Correlations			
	Time 1	Sig	Time 2	sig
Beck Anxiety Inventory	-0.39	**	-0.34	*
Contentment	0.31	*	0.41	*
Culture Shock	-0.66	***	-0.71	***
Beck Depression Inventory	-0.40	**	-0.33	*
Homesickness	-0.24	*	-0.37	*
Beck Hopelessness Inventory	-0.45	***	-0.41	*
Satisfaction with Life Scale	0.40	**	0.41	*

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

Table 5  
Country Listing of Emotion Regulation Scores from the ICAPS

---

Country	ICAPS Emotion Regulation Score	Standardized Emotion Regulation Score
Australia	4.5848	0.213797
Austria	4.7576	0.885069
Belgium	4.5703	0.157469
Botswana	4.4318	-0.38056
Brazil	4.6295	0.387442
Bulgaria	4.7576	0.885069
Canada	4.555	0.098034
Chile	4.6295	0.387442
China	3.955	-2.23277
Costa Rica	4.6981	0.653931
Croatia	4.7576	0.885069
Denmark	4.9283	1.548183
El Salvador	4.6981	0.653931
Estonia	3.3636	
Finland	4.9283	1.548183
France	4.5703	0.157469
Germany	4.5703	0.157469
Greece	4.4697	-0.23333
Guatemala	4.6981	0.653931
Hong Kong	4.1481	-1.48264
Hungary	4.7576	0.885069
India	4.6391	0.424735
Indonesia	3.7465	
Israel	4.1136	-1.61666
Italy	4.4697	-0.23333
Japan	3.8684	-2.56918
Lebanon	4.5706	0.158635
Malawi	4.4318	-0.38056
Malaysia	3.9091	-2.41108
Mexico	4.5007	-0.1129
Netherlands	4.5703	0.157469
Nigeria	4.3636	-0.64549
Norway	4.9283	1.548183
New Zealand	4.8505	1.245955
Peru	4.6295	0.387442
Philippines	4.3341	-0.76009
Poland	4.7576	0.885069
Portugal	4.4697	-0.23333

Russia	4.4132	-0.45281
South Africa	4.4318	-0.38056
South Korea	4.2617	-1.04134
Spain	4.4697	-0.23333
Sweden	4.9283	1.548183
Switzerland	4.7576	0.885069
Taiwan	4.0871	-1.71961
Thailand	4.2222	-1.19479
Turkey	4.6667	0.531952
USA	4.497	-0.12728
Venezuela	4.6295	0.387442
Yugoslavia	4.7576	0.885069
Zambia	4.4318	-0.38056
Zimbabwe	4.4318	-0.38056