Psychological Traits Affecting Both Cultural Adaptation and Foreign Language Acquisition

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Abstract

This empirical study goes a long way in determining the psychometric variables that predict individual differences in terms of the degree of success in both cultural adaptation and foreign language acquisition (FLA). Ever since Schumann (1978) introduced his Acculturation Model, the most well-known attempt to link cultural adaptation with FLA, a number of empirical studies have sought to determine these psychometric variables with mixed results due to the wide variation in the research methodologies applied in terms of learning targets, achievement measures, types of treatment, etc. (Dörnyei, 2005). This study overcomes the weaknesses of many previous studies. The experiment involved 86 Chinese students studying at a major private Japanese university in Japan. The 16 psychometric scales of the Kozai Group's Global Competency Inventory (GCI), a validated psychometric instrument for measuring psychological traits affecting success in cultural adaptation, were employed as independent variables. The dependent variable was "Japanese Ability" in terms of oral/aural performance measured by six native Japanese raters reviewing video-recorded individual structured interviews conducted in Japanese with the Chinese students by a Japanese native speaker. Out of the 16 GCI psychometric scales, 14 demonstrated highly significant associations with the "Japanese Ability" of the Chinese students participating in the study. The results are very promising in elucidating the psychological traits modulating both cultural adaptation and foreign language acquisition.

Introduction

A company assumes a substantial financial risk when sending an executive abroad and it is imperative to discern individual differences in cultural adaptation. Thus, there are numerous psychometric instruments that seek to provide such a service. Likewise, accounting for individual differences in foreign language acquisition has been the goal of researchers in the field of second language acquisition (SLA) or foreign language acquisition (FLA). In this paper it is hypothesized that since language and culture are so interrelated a validated and robust psychometric instrument used by corporations in the expatriate selection process, such as the Kozai Group's Global Competency Inventory (GCI), may also serve to predict individual differences in foreign language acquisition.

For many years numerous researchers in SLA such as Taylor (1974), Schumann (1975), and Brown (1980) have argued that success or failure in foreign language acquisition is largely the result of social, psychological, and affective (SPA) factors. Though instruments that incorporate SPA factors, such as the GCI, have been used successfully to predict individual differences in cultural adaptation, there has not been much success in developing psychometric instruments comprised of SPA factors to predict individual differences in foreign language acquisition with a particular focus on oral/aural performance in the foreign language. Thus, there are two main related research questions that informed the experiment reported in this paper. The first is "what psychological traits (including attitudinal, affective and personality factors) make some people better at foreign language acquisition and oral/aural performance than others?" Subsequently, "do the psychological traits that help explain why some people adapt to cultures better than others also help explain individual differences in foreign language acquisition, particularly in terms of oral/aural performance?"

Schumann's Acculturation Model (1978) is one of the most well known early attempts to explore the relationship between cultural adaptation and SLA/FLA. Schumann's (1986) acculturation model predicts that learners will acquire the target language to the degree they acculturate to the target language group. Schumann (1986) argued that two groups of variables – social factors and affective factors – cluster together into a single

variable that is a major causal variable in SLA. Schumann called this variable acculturation - the social and psychological integration of the learner with the target language (TL) group. Schumann (1986, p. 379) stated: "I also propose that any learner can be placed on a continuum that ranges from social and psychological distance to social psychological proximity with speakers of the TL, and that the learner will acquire the second language only to the degree that he acculturates."

Larsen-Freeman and Long (1991) argue that Schumann did not specify the combinations and/or levels of social and psychological factors to predict language outcomes and that Schumann did not explain how these factors affect the rate of attainment. This remark shows the excessive demands of strict empiricism, expecting definitiveness where it may not be available. The experiment presented in this research serves to partially address this concern, however, it must be understood that there is no one single recipe for success in SLA/FLA. The experiment in this research does not attempt to quantitatively verify Schumann's Acculturation Model, but the results do demonstrate that model is very insightful and that any model attempting to explain individual differences will be more robust by incorporating these culture-language related factors.

According to Dörnyei (2005), inconclusive results in the literature concerning the relationship between psychological traits (SPA variables) and SLA have been partly due to methodological limitations or inconsistencies. The main issues concerning reliable and meaningful results are: (1) the dependent variable – measures of individual differences in FLA and (2) the independent variable(s) – measures of psychological traits (such at personality, attitudes, motivation, etc.) – and the theoretical constructs tying together the measured independent variables.

The dependent variable (SLA/FLA) has often been language achievement in terms of academic success in foreign language study measured by such criteria as exam grades, grade point average, final degree results, and course-specific evaluations. All these are very indirect measurements of performance compared to native speakers of the target language and do not capture the finer points of individual differences in oral/aural performance such as communication competence, accent, pronunciation, naturalness of speech, etc. Some early studies (e.g., Naiman et al., 1978) that only examined achievement in FLA by measuring written language ability, found no relationships between these criteria and extraversion - introversion. In contrast, Dewaele and Furnham (1999) have pointed out that in studies where extraversion scores are correlated with linguistic variables extracted from complex verbal tasks, such as conversations, there is a clear pattern of extroverts outperforming introverts. This supports the argument that oral interaction in a foreign language is the most effective way to see how differences in personality traits (SPA factors) may correspond to differences in performance. Accordingly, this study employs evaluation of the participants' oral/aural performance in a foreign language to measure the dependent variable.

There are also problems with consistency: akin to the proverbial comparison of apples and oranges. In other words, are the subjects similar enough in terms of their relevant background or demographic factors (those that would affect FLA performance but are not psychological traits or SPA)? In order to obtain more reliable results for the dependent variable, these relevant demographic variables must be considered in selecting the participants of the study.

As for the independent variables, the approach of this study is to examine factors that have been proven to account for individual differences in successfully cultural adaptation. This approach addresses the need for more complex theoretical constructs. MacIntyre, Clément, Dörnyei, and Noels (1998) offer the Willingness to Communicate (WTC) model in which personality comprises an important part of the construct, with four further layers of variables conceptualized between personality traits and communicative behaviour (Dörnyei, 2005). However, there is still a need to follow a theoretical construct that takes into to consideration that actively functioning in a foreign language usually takes place in a foreign cultural environment. Thus, it is necessary to explore which psychological factors facilitate both cultural adaptation and foreign language acquisition.

Method

Design

The design of the experiment incorporated a validated instrument that measures SPA factors that affect cultural adaptation. In this case, successful cultural adaptation is understood as the ability to function successfully in a foreign culture. Examples of functioning include work or study abroad. The psychometric scales of the research instrument provided the SPA variables serving as the independent variables in the analysis. The dependent variable was oral/aural performance in the target language. The analysis focused on associations between scores on the independent variables and the dependent variable.

Sample

In order to avoid the pitfalls of previous studies, in selecting the group from which the sample was taken, considerable attention was paid to the potentially confounding demographic variables, ones that could affect the dependent variable (degree of success in SLA/FLA) but are not under study. These demographic factors include the mother tongue of the participants, a predefined level of attainment in the target language, the number of languages spoken by the participants, the principle instrumental motivation for learning the language, how and where the target language was studied before functioning in the target language in line with the principle motivation, a predefined length of sojourn in the target language country, a predefined age at which the participants first came to the target language country, the number of countries visited besides the target language country for at least one week, and self-reported ability in the target language upon arrival in the target language country.

A group of 550 Chinese students studying content courses in Japanese at Kyushu Sangyo University in Fukuoka, Japan served as the statistical sample of SLA/FLA learners from which 86 students volunteered to participate in the experiment. Though one of the reasons this sample was selected was convenience since the students study at the institution where the experimenter is a professor of international management, the experimenter was also keenly aware that the sample was optimal in terms of controlling for potentially confounding demographic variables.

All the participants speak Chinese as their mother tongue. It is important that all the participants share the same mother tongue because cognate languages, languages with similar phonetic systems, and languages with similar syntactic characteristics are easier to learn. Japanese has borrowed from the Chinese writing system (thus there are numerous cognates in terms of words written in kanji) but the phonetic system and grammatical system of Japanese are quite different from those of Chinese. All the participants had attained a level in Japanese high enough to be admitted to the university where all content classes are taught in Japanese.

The status of a number of the other demographic variables under consideration was anticipated based on experience. The majority of the students would only be proficient in Chinese and Japanese. This factor is relevant since ability in multiple languages greatly facilitates the acquisition of additional languages. The principle instrumental motivation for learning the language would be to study at a Japanese university. The predefined length of sojourn in the target language country refers to ‘at least two years’ and this could be anticipated since the majority of Chinese students at the university study at a Japanese language school for an average of two years before entering the university. The predefined age at which the participants first came to the target language country is not before the age of 18. The majority of Chinese students at the university have come to Japan at least after graduation from high school in China. The number of countries visited besides the target language country for at least one week was anticipated to be very low since Japan is the only foreign country to which most of the Chinese foreign at the university students have ever been. Self-reported ability in the target language upon arrival in the target language country was anticipated to be low since Japanese is not widely taught in Chinese high schools. All of these demographic variables among others were analyzed in relation to the dependent variable and the results are reported in the statistical analysis section.

Measuring Instruments

Kozai Group's Global Competency Inventory (GCI) was selected as the instrument to provide and measure the SPA independent variables. After reviewing most of the questionnaires that are used to predict people's ability to function effectively in cross-cultural environments, the GCI was considered the most appropriate instrument based on personal expertise and experience in the field of cross-cultural management. The Kozai Group kindly agreed to cooperate by offering the free use and analysis of the GCI in the experiment. Rankings for the experimental subjects in the 16 GCI competencies were obtained in order to explore if relatively higher scores on the GCI corresponded with higher oral/aural performance in a foreign language. The 16 competencies of the GCI are associated with effective intercultural behavior and dynamic global managerial skill acquisition. They are grouped under three factors: Perception Management, which deals with learning effectively and includes (1) Nonjudgmentalness, (2) Inquisitiveness, (3) Tolerance for Ambiguity, (4) Cosmopolitanism, and (5) Interest Flexibility; Relationship Management, which focuses on managing relationships effectively and is comprised of (6) Relationship Interest, (7) Interpersonal Engagement, (8) Emotional Sensitivity, (9) Self-Awareness, and (10) Social Flexibility; and Self-Management, which explores managing the self in challenging situations and is composed of (11) Optimism, (12) Self-Confidence, (13) Self-Identity, (14) Emotional Resilience, (15) Non-Stress Tendency, and (16) Stress Management. Specification of the content domain of the GCI is readily available at http://kozaigroup.com/PDFs/GCI-Technical-Report-Dec 2008-1.pdf.

The measurement of the dependent variable (SLA/FLA) was the participants' oral/aural performance in Japanese ("Japanese Ability"). Six native speakers of Japanese, with graduate degrees in various fields and ranging in age for 24 to 62, were hired to view videotaped interviews conducted in Japanese with the participants and rank their ability in spoken Japanese. The evaluation criterion was "how closely the Chinese students sounded like a Japanese native speaker." The six Japanese judges viewed the 86 video files and ranked the subjects independently (no consultation with one another) over a period of one month. The judges were instructed to force-rank the participants' performance on a 5-point Likert scale (1 = the lowest and 5 = the highest) assigning 18 participants with the score of 5, and the remaining four groups of participants (17 in each group) with rankings of 4, 3, 2, or 1 (18 + 17 + 17 + 17 + 17 = 86). They also assigned a numerical rating (100 points as the highest rating) for each subject similar to what a teacher would do when grading papers. The sum of this number was only used to determine cut-off points for the Top and Bottom 17 when there were equal rankings at the "cut-off points.

Table 1

"Japanese Ability" Ranking: Std. Dev. Using 4 Scores

Ranking (across):		5	4.75 - 4	3.75 - 3	2.75 – 2.25	2.0 – 1.0
Std Dev (down)	Total	9	14	21	23	19
0.000	14	9	1	1	0	3
0.409	1	0	0	1	0	0
0.500	28	0	6	5	5	12
0.517	13	0	3	2	6	2
0.816	10	0	2	4	4	0
0.957	12	0	2	3	5	2
1.000	2	0	0	2	0	0
1.258	6	0	0	3	3	0
Avg. Std Dev	*0.594*	*0.000*	*0.591*	*0.760*	*0.773*	*0.497*

At first, calculating the mean scores given by all six raters yielded an average standard deviation of 0.926. To reduce inter-rater variation the highest value and lowest value were discarded leaving four scores. In the case of more than one score representing the highest and/or the lowest value, only one of the equivalent scores was discarded (for example, original scores of 5, 5, 4, 4, 3, 3 would become 5, 4, 4, 3 yielding a mean of 4). The four scores obtained using this system were averaged. This average was used as the measurement of "Japanese Ability." The highest nine participants (average score of 5) and the lowest 3 participants (average score of 1) obviously requires complete agreement (Std. Dev. = 0). The average scores between 3.75 – 3 and 2.75 – 2.25 had the highest standard deviations, 0.760 and 0.733 respectively. This was expected since the range between 2.25 and 3.75 (34 out of 86) represents the most difficult group to score since difference between the participants ability in Japanese would theoretically be the smallest in the middle groupings. A summary of the standard deviations for the ratings using four scores is presented in Table 1 below.

For comparing GCI mean scores, the Top 17 and Bottom 17 were selected. For the Top 17 participants the average standard deviation between the final 4 ratings of "Japanese Ability" used was 0.210 while that for the Bottom 17 participants was 0.420. This method yields very high reliability in terms of the measurement of "Japanese Ability" in oral/aural performance.

In summary, the reliability of the measurement for "Japanese Ability" when using all 86 subjects is 0.594 in terms of average standard deviation as an indication of inter-rater variability. Given that the ranking of "Japanese Ability" is on a 5-point Likert scale, an average standard deviation of 0.594 is respectively low indicating high relatively inter-rater agreement. The reliability of the measurement for "Japanese Ability" when using the Top 17 and Bottom 17 sub-groups is 0.315 in terms of average standard deviation. The average rating of "Japanese Ability" for the Top 17 is 4.705 while that of the Bottom 17 is 1.617, yielding an average difference between the two groups' scores of 3.08.

Procedure

A Chinese version GCI was administered to the participants consisting of 86 Chinese students studying at Kyushu Sangyo University where Japanese is the main medium of instruction. The translation of the GCI into Chinese was done under the auspices of the Kozai Group. The author, who is fluent in Chinese, along with 10 Chinese graduate students, checked the reliability of the translation. Thereafter, the students participated in a videotaped seven-minute semi-structured interview with a Japanese native speaker who interviewed all the 86 subjects on an individual basis. For the first few minutes of the interview the students read a short essay in Japanese concerning "reasons for learning foreign languages." The remaining time of the interview was spent replying to a set of questions concerning their experiences and feelings about studying in Japan and learning Japanese. The Kozai Group provided analysis of the GCI questionnaires yielding scores for each of the 16 independent variables for each participant. Thereafter, the association between these scores and the ranking for dependent variable "Japanese Ability" was analyzed.

Statistical Analysis

For purposes of analysis, using the ranking method of "Japanese Ability" previously described, the 86 participants were divided into five groups with 18 participants in the highest group and 17 participants in the other four groups (in line with the rating system in which 18 participants were assigned a score of 5, though their actual score is an average of the final ratings as previously described). As previously mentioned, the Top 17 and one Bottom 17 were also compared in the analysis since the variance among the raters is lowest for the Top 17 and Bottom 17. Comparison between these two groups yields the most accurate results and allows for appraisal of means between the two groups. So while the comparison between these two groups yields the most reliable results, it is also interesting to explore to what extent the correlations remain positive or negative (as well as any change in significance) and to what extent the *F* value of the ANOVA changes when all five groups are analyzed.

The scores for "Japanese Ability" are analyzed in relation to the total GCI score (summation of all 16 GCI variables), the scores for the three factor variables (summation of their respective components), and the

scores for the 16 individual GCI variables. Multivariate analysis is not carried out since the GCI has already been refined using such techniques producing the principle components that modulate cultural adaptation. The goal of the study is explore whether or not psychological variables that facilitate cultural adaptation also facilitate SLA/FLA. Statistical modeling is most appropriate in this case and the focus requires the designation of dependent and independent variables.

Hypotheses

The 16 competencies of the GCI are associated with effective intercultural behavior. Thus, they represent the psychological traits that help explain why some people adapt to cultures better than others. High scores for the total GCI score, the 16 GCI competencies and the three factor variables (Perception Management, Relationship Management, and Self-Management) are associated with effective cultural adaptation. It is hypothesized that the psychological traits associated with effective cultural adaptation are also associated with effective language acquisition measured in terms of oral/aural performance.

Summary Hypothesis 1a: There are significant positive correlations between "Japanese Ability" and the total GCI score, the scores for the 16 competencies of the GCI, as well as the scores for the three factor variables.

Summary Hypothesis 1b: The mean scores of the Top 17 in "Japanese Ability" subgroup for the total GCI, the 16 competencies of the GCI, as well as the three factor variables are significantly higher than those of the Bottom 17 subgroup.

Summary Null Hypothesis 1a: The correlations between "Japanese Ability" and the total GCI score, the scores for the 16 competencies of the GCI, as well as the scores of the three factor variables are non-significant or significantly negative.

Summary Null Hypothesis 1b: There are no significant differences between the mean scores of the Top 17 in "Japanese Ability" subgroup for the total GCI, the 16 competencies of the GCI, as well as the three factor variables and those of the Bottom 17 subgroup.

Results

Analysis of the Demographic Data

The relevant demographic data was analyzed in relation to "Japanese Ability" in order to determine if these demographic data account for individual differences in the dependent variable. This is important since differences in relevant demographic characteristics have confounded the interpretation of the results of many previous studies. In summary, as predicted, the careful selection of the sample group has made it possible to avoid this pitfall.

The mean age of all 86 subjects was 24.31 with a range of 19 to 32 years of age. There was no significant correlation between age and "Japanese Ability" (N = 34/86 Pearson Correlation: 0.116/0.089, Sig. 2-tailed: 0.512/0.415).

In light of the so-called "Critical or Sensitive Period" hypothesis, "Age Started to Study a Foreign Language" (ASSFL) was investigated. The variable ASSFL was created by re-coding the ages: age 9 and below = 4, age 10 ~13 = 3, age 14~17 = 2, and age 19 and above = 1. There is no correlation between the recoded variable and "Japanese Ability" (N = 34/86 Pearson Correlation: -0.018/-0.100, Sig. 2-tailed: 0.919/0.359).

As for gender, there were 30 male subjects (34.9%) and 56 female subjects (65.1%). There was no significant relationship between gender and "Japanese Ability" (N = 34/86 Pearson Correlation: -0.124/-0.045, Sig. 2-tailed: 0.484/0.678). If there were a correlation then a negative number would mean being male may be an advantage since Male = 1 and Female = 2.

The relationship between "age came to Japan" and "Japanese Ability" was also explored. There was no significant relationship between "age when came to Japan" and "Japanese Ability" (N = 34/86 Pearson Correlation: 0.089/0.116, Sig. 2-tailed: 0.415/0.512). However, on average the Top 17 came to Japan at a later age than the Bottom 17 did.

"Months residing in Japan" at the time of the experiment was also recorded and analyzed. There was no significant correlation between "Months residing in Japan" with "Japanese Ability" (N = 34/86 Pearson Correlation: 0.076/0.111, Sig. 2-tailed: 0.668/0.308). The lack of a significant correlation between "Months residing in Japan" and "Japanese Ability" is not surprising. Almost all the subjects have been in Japan for at least 2 years. This is sufficient time for adept language learners to acquire a high level of Japanese given sufficient motivation. Length of residence tends to decrease in importance as time passes and 2 out of the 7 longest residents (all subjects included) are in the Bottom 17.

The "number of countries visited besides Japan for at least one week" was also noted. The overall majority of the subjects (88.4%) have not been to a foreign country other than Japan. Three of the 10 people who have visited a foreign country besides Japan are in the Top 17 and one is in the Bottom 17 in terms of "Japanese Ability." Furthermore, only one subject had lived in another foreign country besides Japan (Russia) and the subject lived there for six months. This subject is not in the Top 17 in terms of "Japanese Ability." The intent was to capture cases in which participants have extensive experience abroad besides Japan. Given these results analysis of the correlation with "Japanese Ability" is superfluous.

The number of languages spoken by the subjects was also analyzed. Though the correlations between "Japanese Ability" and "Numbers of Languages Spoken" are only significant at 0.112 (88%) for the Top/Bottom 17 and 0.074 (92%) for all subjects, in general, the author has experienced that learning languages gets easier as the number of languages spoken increases. One reason for the lack of a significant correlation may be the fact that all the subjects obviously spoke at least 2 languages (Chinese and Japanese) and the number of subjects who spoke 3 languages was only about 25% of the total number of subjects. Note that 35.3% of the Top 17 spoke 3 languages compared to only 1.2% of the total 86 subjects.

The "number of months spent studying in a Japanese languages school in Japan" was also investigated. There is no significant correlation between the number of months spent studying at a Japanese Language School in Japan with "Japanese Ability" (N = 34/86 Pearson Correlation: -0.146/-0.172, Sig. 2-tailed: 0.374/0.112). Note that though the results are not statistically significant they are slightly negative. Ironically, overall the subjects in the Top 17 have spent less time in a Japanese Language School in Japan than the subjects in the Bottom 17. This observation suggests autonomy and self-directed language learning may be a factor in determining the degree of success.

A number of motivational questions were included in the questionnaire. Among these questions two demonstrated a significant relationship between: "I wanted to learn Japanese in order to study at a Japanese University" (N = 34/86 Pearson Correlation: 0.407/0.220, Sig. 2-tailed: 0.017/0.042) and "I wanted to learn Japanese because I like to learn foreign languages" (N = 34/86 Pearson Correlation: 0.444/0.291, Sig. 2-tailed: 0.009/0.007). In addition, analysis of variance for the Top/Bottom 17 yielded an F of 10.419 and an F of 2.992 for all 86 subjects. It is interesting to note that enjoying learning foreign languages was the most significant factor of the all the motivational factors investigated.

The self-reported ability in Japanese of the subjects was also analyzed. There is no significant correlation between the subjects' self-reported "Japanese Ability" when they first came to Japan and their present measured "Japanese Ability" (N = 34/86 Pearson Correlation: - 0.010/0.0.051, Sig. 2-tailed: 0.956/0.664).

Analysis of the Total GCI as a Summary Variable

The results clearly indicate that the total GCI (summation of all 16 GCI variables) can be very powerful predictor of oral/aural performance in foreign languages. The analysis of variance of the total GCI scores yielded an F Value of 51.648 ($p < .001$) for the Top 17 versus the Bottom 17 and an F Value of 16.967 ($p < .001$) for all five groups. The F Values are significantly high indicating that the differences between the groups are significantly greater than the differences between the individuals within the groups compared.

As shown in Table 2, the mean score of the Top 17 subgroup for the total GCI is significantly greater than that of the Bottom 17. Thus, the null hypothesis that there is no significant difference between the mean of the Top 17 subgroup's scores for total GCI and that of the Bottom 17 subgroup is rejected.

The results reported in Table 3 show that there is a high significant positive correlation between the total GCI scores and "Japanese Ability" in the case of the Top 17 and Bottom 17 as well as in the case of all 86 subjects. Therefore, the null hypothesis that the correlation between the total GCI scores and "Japanese Ability" is non-significant or significantly negative is rejected.

Analysis of the Perception Management Variable and Components

The analysis demonstrates that the Perception Management Factor Variable (PMFV) predicts foreign language oral/aural performance; however, the PMFV is the weakest of the three summary variables since two of the competencies in this factor variable did not demonstrate any predictive power on their own.

Table 2
Differences of Means for the GCI Summary Variable

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GCI Summary Variable	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	Mean Difference	Std. Error	Inter 95% Conf.
Top 17	17	3.47	0.29	0.07	0.000	0.64	0.0009	0.4594 to
Bottom 17	17	2.83	0.22	0.05				0.8229

Table 3
Correlation between "Japanese Ability" and the GCI Summary Variable

Scale	Pearson Correlation	Significance (2-Tailed)	Subjects
Global Competency Score	0.779/0.624	0.000/0.000	34/86

Table 4
"Japanese Ability" Groups' F Values for PMFV and Sig. Components

	Top/Bottom 17	Significance	Five Groups	Significance
PMFV	20.808	.000	7.451	.000
Tolerance of Ambiguity	19.146	.000	5.623	.000
Cosmopolitanism	6.206	.018	2.675	.036
Interest Flexibility	9.830	.004	3.266	.016

The analysis of variance shows that the differences between the groups are greater than the differences among the participants within the groups for the PMFV, Tolerance of Ambiguity, Cosmopolitanism, and Interest Flexibility. The results are not significant for Nonjudgmentalness, and Inquisitiveness. The *F* Values for PMFV and the significant component variables are given in Table 4.

Table 5
Correlations between "Japanese Ability" and the PMFV

Scale	Pearson Correlation	Significance (2-tailed)	Subjects
Perception Management	.613/.416	.000/.000	34/86
Nonjudgmentalness	-.185/-.069	.295/.527	34/86
Inquisitiveness	.076/.015	.671/.894	34/86
Tolerance of Ambiguity	.583/.410	.000/.000	34/86
Cosmopolitanism	.456/.366	.007/.001	34/86
Interest Flexibility	.471/.238	.005/.027	34/86

As seen in Table 5, there are significant correlations between "Japanese Ability" and the scores for the PMFV, Tolerance of Ambiguity, Cosmopolitanism, and Interest Flexibility for both the Top 17 and Bottom 17 as well as for all 86 participants but not for Nonjudgmentalness, and Inquisitiveness. Thus, the null hypothesis that the correlation between the scores for Perception Management with "Japanese Ability" is non-significant or significantly negative is rejected for the PMFV, Tolerance of Ambiguity, and Cosmopolitanism but not for Nonjudgmentalness, and Inquisitiveness.

As seen in Table 6, the Top 17 subgroup mean scores are significantly greater than those of the Bottom 17 for the PMFV and the component variables Tolerance for Ambiguity, Cosmopolitanism, and Interest Flexibility but not for Nonjudgmentalness and Cosmopolitanism.

Table 6
Differences of Means for the PMFV

	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	Mean Difference	Std. Error	Interval 95% Conf.
Perception Management								
Top 17	17	3.5126	0.4713	.071	.000	0.7311	0.1603	0.4046 to
Bottom 17	17	2.7815	0.4632	.055				1.0576
Nonjudgmentalness								
Top 17	17	2.6928	0.5069	0.123	.388	-0.1438	0.1644	-4.876 to
Bottom 17	17	2.8366	0.4498	0.1091				0.1910
Inquisitiveness								
Top 17	17	2.8301	0.50ß94	0.1235	.672	-0.0654	0.1529	-3.768 to
Bottom 17	17	2.8954	0.3716	0.0090				0.2461
Tol. of Ambiguity								
Top 17	17	4.0412	0.4417	0.1071	.000	0.6026	0.1377	0.3221 to
Bottom 17	17	3.4386	0.3569	0.0865				0.8831
Cosmopolitanism								
Top 17	17	3.0686	0.3362	0.0816	.018	0.2598	0.1043	0.0473 to
Bottom 17	17	2.8088	0.2680	0.0650				0.4722
Interest Flexibility								
Top 17	17	3. 0924	0.7248	0.1758	.004	0.7143	0.2278	0.2502 to
Bottom 17	17	2.3782	0.5975	0.1449				1.1783

The null hypothesis that there are no significant differences between the Top 17 subgroup's mean scores and those of the Bottom 17 subgroup is rejected for the PMRV, Tolerance of Ambiguity, and Cosmopolitanism, but not for Nonjudgmentalness and Inquisitiveness.

Analysis of the Relationship Management Variable and Components

Of the three factor variables, the Relationship Management Factor Variable (RMFV) is the second strongest predictor of foreign language oral/aural performance. The analysis of variance for the RMFV and component variables is given in Table 7. All the RMFV variables have significantly high *F* Values indicating that the differences between the groups are significantly greater than the differences between the individuals within the groups compared.

Table 7
"Japanese Ability" Groups' F Values for RMFV and Sig. Components

	Top/Bottom 17	Significance	Five Groups	Significance
RMFV	25.601	.000	10.836	.000
Relationship Interest	32.558	.000	8.906	.000
Interpersonal Engagement	15.708	.000	6.473	.036
Emotional Sensitivity	33.283	.000	11.910	.000
Self-Awareness	11.187	.000	4.308	.000
Social Flexibility	31.551	.000	6.806	.000

As shown in Table 8, the mean scores of the Top 17 subgroup are significantly greater than those of the Bottom 17 for the RMFV and all the component variables. The null hypothesis that there are no significant differences between the mean scores of Top 17 subgroup and those of the Bottom 17 subgroup is rejected for the RMFV and all the component variables.

Table 8
Differences of Means for the RMFV

	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	Mean Difference	Std. Error	Interval 95% Conf.
Relationship Management								
Top 17	17	3.3295	0.2813	0.0682	.000	0.6738	0.1181	0.2611 to
Bottom 17	17	2.8924	0.2184	0.0530				0.6130
Rel. Interest								
Top 17	17	3.6150	0.3864	.0937	.000	0.6738	0.1181	0.4333 to
Bottom 17	17	2.9412	0.2962	.0719				0.9143
Int. Engagement								
Top 17	17	3.7279	0.4640	0.1125	.000	0.6544	0.1651	0.3181 to
Bottom 17	17	3.0735	0.4982	0.1208				0.9907
Emotional Sen.								
Top 17	17	3.8382	0.4755	0.1153	.000	0.7721	0.1338	0.4995 to
Bottom 17	17	3.0663	0.2799	.0679				1.0447
Self-Awareness								
Top 17	17	3.6863	0.5763	0.1398	.000	0.5621	0.1681	0.2198 to
Bottom 17	17	3.1242	0.3847	.0933				0.9044
Social Flexibility								
Top 17	17	3.6667	0.4101	.0995	.000	0.6993	0.1245	0.4457 to
Bottom 17	17	2.9637	0.3087	.0748				0.9530

Furthermore, there are significant correlations between the RMFV scores and all the component variable scores with “Japanese Ability” for the Top 17 and Bottom 17 as well as for all 86 participants (Table 9). The null hypothesis that the correlation between the scores for the RMFV and all the component variables with “Japanese Ability” is non-significant or significantly negative is rejected.

Analysis of the Self-Management Variable and Components

The Self-Management Factor Variable (SMFV) is the strongest predictor of foreign language oral/aural performance. The analysis of variance for the SMFV and component variables is given in Table 10. All the SMFV variables have significantly high *F* Values indicating that the differences between the groups are significantly greater than the differences between the individuals within the groups compared. The F Value for SMFV is much greater than those for the other two factor variables (Perception Management and Relationship Management). Additionally, the *F* value for Self-confidence is much greater than that of any other GCI component.

As seen in Table 11, there are significant correlations between the scores of the SMFV and all the component variables and Japanese ability for both the Top 17 and Bottom 17 as well as for all 86 participants. The null hypothesis that the correlation between the scores for all the SMFV and all the component variables with “Japanese Ability” is non-significant or significantly negative is rejected.

The analysis of the difference of means between the Top 17 subgroup mean score are significantly greater than that of the Bottom 17 means for the SMFV and all the component variables as shown in Table 12. The null hypothesis that there are no significant differences between the means scores of the Top 17 subgroup and those of the Bottom 17 subgroup is rejected for the SMFV and all the component variables.

Table 9
Correlations between "Japanese Ability" and the RMFV

Scale	Pearson Correlation	Significance (2-tailed)	Subjects
Relationship Management	.661/.523	.000/.000	34/86
Relationship Interest	.798/.509	.000/.000	34/86
Interpersonal Engagement	.600/.453	.000/.000	34/86
Emotional Sensitivity	.707/.535	.000/.000	34/86
Self-Awareness	.527/.395	.000/.000	34/86
Social Flexibility	.691/.450	.000/.000	34/86

Table 10
"Japanese Ability" Groups' F Values for SMFV and Sig. Components

	Top/Bottom 17	Significance	Five Groups	Significance
SMFV	43.801	.000	16.543	.000
Optimism	23.447	.000	8.444	.000
Self-Confidence	32.666	.000	8.779	.000
Self-Identity	70.531	.000	17.499	.000
Emotional Resilience	15.295	.000	3.643	.009
Non-Stress Tendency	17.640	.000	7.179	.000
Stress Management	4.631	.039	3.098	.020

Table 11
Correlations between "Japanese Ability" and the SMFV

Scale	Pearson Correlation	Significance (2-Tailed)	Subjects
Self-Management	0.769/0.622	.000/.000	34/86
Optimism	0.659/0.521	.000/.000	34/86
Self-Confidence	0.712/0.490	.000/.000	34/86
Self-Identity	0.801/0.589	.000/.000	34/86
Emotional Resilience	0.508/0.349	.000/.000	34/86
Non-Stress Tendency	0.602/0.494	.000/.000	34/86
Stress Management	0.399/0.309	.019/.004	34/86

Table 12
Differences of Means for the SMFV

	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	Mean Difference	Standard Error	Interval 95% Conf.
Self-Management								
Top 17	17	3.6788	0.3452	0.0837	.000	0.6788	0.1181	0.4699 to
Bottom 17	17	2.8924	0.9944	0.2411				0.8876
Optimism								
Top 17	17	3.4748	0.5119	0.1242	.000	0.7059	0.1181	0.4089 to
Bottom 17	17	2.7689	0.3150	0.0764				1.0028
Self-Conf.								
Top 17	17	3.7861	0.2447	0.0593				0.3511 to
Bottom 17	17	3.2406	0.3082	0.0748	.000	0.5455	0.0954	0.7399
Self-Identity								
Top 17	17	3.6529	0.3184	0.1153	.000	0.8294	0.0988	0.6282 to
Bottom 17	17	2.8235	0.2538	.0679				1.0306
Emotion. Res.								
Top 17	17	3.4779	0.4244	0.1029	.000	0.4926	0.126	0.2361 to
Bottom 17	17	2.9853	0.2994	0.0726				0.7492
Non-Stress T.								
Top 17	17	3.3922	0.5894	0.1430	.000	0.7974	0.1899	0.4107 to
Bottom 17	17	2.5948	0.5151	0.1249				1.1841
Stress Man.								
Top 17	17	2.9902	0.7488	0.1816	.039	0.451	0.2096	0.02413 to
Bottom 17	17	2.5948	0.4311	0.1046				0.8778

Discussion and Conclusions

Previous research on the effect of social, psychological, and affective factors on foreign language acquisition has not been always been definitive or holistic in approach. In addition, few researchers besides Schumann (1978) have pursued a theoretical approach that combines cultural adaptation and language acquisition. There are a number of reasons why the results of this study appear relatively more definitive.

First of all, this study has overcome the weaknesses of some previous research studies by carefully controlling for demographic factors that could be significantly responsible for individual differences performance in the target language but not related to the psychological traits or SPA factors under investigation. Specifically, all participants had the same mother tongue, started speaking the target language after the age of 18, studied the target language under similar conditions, had limited experience in other foreign countries besides Japan, had similar instrumental motivation, have lived at least two years in the target language country, had reached a level high enough to permit taking content courses in the target language, and spoke only either two or three languages. Furthermore, the dependent variable (SLA/FLA) was measured by the subjects' oral/aural performance in semi-structured interviews in which affective variables are most active. Finally, the main thrust of the study was to investigate if the SPA factors that facilitated functioning successfully in foreign cultures also facilitated foreign language acquisition. This approach offers a more holistic theoretical approach to investigating the role of SPA variables in SLA/FLA.

The results indicate that the Kozai Group's GCI is a very strong predictor of individual differences in oral/aural performance in foreign languages. High scores on a total of 14 of the 16 competencies comprising the GCI were strongly associated with high oral/aural performance in the target foreign language. Among the three factors that comprise the GCI, Self-Management was the strongest predictor followed by Relationship Management. Among the 16 competencies, Self-Identity was the strongest predictor of oral/aural.

These results coincide with the author's expectations based upon 38 years of experience functioning in multiple countries in over 20 languages. The GCI was selected based on this experience. Discussion of all the research findings and background knowledge related to the independent variables examined in this study is not possible in the limited space available here and will hopefully published in the form of a book soon. Nevertheless, a few comments concerning Self-Identity seem appropriate.

A number of researchers recognize the central relationship between identity and SLA/FLA. Among the affective variables modulating FLA, Ehrman (1996) focuses in particular on learner identity and self-concept: "Every imaginable feeling accompanies learning; especially learning that can be as closely related to who we are, as language learning is." The ability and willingness to mimic accents of native speakers of the target language is strongly modulated by the flexibility of one's linguistic and cultural identity. The development of a strong core identity creates the foundation for obtaining this flexibility.

As Norton (2000, p. 10) stated, "to invest in a language is to invest in an identity." Norton believes that we are encouraged to seek broader explanations for success or failure in language learning and to view the student as having a complex identity that is best understood in the context of wider social, historical, and economic processes. It is being argued here that to be a good at acquiring foreign languages requires a flexible self-concept or flexible cultural and linguistic identity along with a well developed strong integrated core identity that allows switching between languages and their corresponding identities without suffering from feelings of internal incongruence.

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