

DETERMINING THE EFFECT OF INTERNATIONAL STUDENT ASSIMILATION ON ACADEMIC AND PROFESSIONAL SUCCESS: AN EXPLORATORY ANALYSIS

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ABSTRACT

Thirty-five Colombian and thirty-five Japanese foreign exchange students were analyzed to determine which group was more completely assimilated into the United States (US) “college” culture. Subsequently, their satisfaction with academic outcomes was explored to determine the effect of this cultural assimilation on students' perceptions. Results indicate that while both the Colombian and Japanese student sojourners closely align with their US counterparts on the dimensions of Power Distance and Uncertainty Avoidance, the Colombian student sojourners also assimilated on the Individualism/Collectivism dimension. As expected, when directly compared and contrasted, the Colombian students assimilated to US culture more easily than Japanese students. Finally, it was determined that although a strong relationship exists between culture and academic perceptions, it was not in the predicted direction, as both the Colombian and Japanese exchange students had higher positive perceptions of the US higher education system than the US students themselves.

INTRODUCTION

The trend of globalization in the university environment has led to the realization and creation of several new educational issues (Nasri, 1993). Increased multinationalism has meant increased interaction between faculty and students from different cultures (Adler, 1983; Nesdale & Mak, 2003; Rutherford, 1994; Waxin, 2004). Previously culturally isolated and homogenous peoples like the Russians (Galchenko & Van de Vijver, 2007), Turkish (Arends-Tóth & Van de Vijver, 2004), and Japanese (Fadil, 1997), now interact on a daily basis with persons, ideas, and products from scattered parts of the globe, thus activating a process of cultural adaption to their new environment (Berry, 1990; Ferarro, 1995; Ward, Leong & Low, 2004).

As universities continue to grow, expand, and serve the needs of a dynamic student body, many have sought to play an increasingly significant international role by forging many international bilateral exchange agreements (Sam, 2001; Sarkodie-Mensah, 1992). This trend toward internationalization has led to a more culturally diverse student body with the numbers of degree-seeking international students and single year foreign exchange students increasing over the last ten years (Nasri, 1993; Sam, 2001). These global educational alliances combined with the increasing international

enrollments at universities makes the academic adaptation of foreign students on US campuses an increasingly important matter (Cox & Blake, 1991).

A considerable amount of research has shown that the adaptation of foreign students to US culture and instructional techniques is a very important and timely issue (Arends-Tóth & Van de Vijver, 2004; Lukas, 1989; Poortinga & Van Hemert, 2001; Rutherford, 1994; Selvadurai, 1991-1992; Zimmerman, 1995). Although attributes such as persistence, assertiveness, self-motivation, articulate verbal communication, and achievement-orientation are valued both academically and professionally in the United States (Accounting Education Change Commission [AECC], 1990), many foreign students who seek educational opportunities in the U.S. are never introduced to these "professional success attributes" until they begin college in the United States. The effective integration of these international students into the academic curriculum is not only essential for institutional growth and international progression, but also for the future retention of highly qualified foreign students.

The lack of cultural assimilation of international students into any academic setting will have far-reaching consequences for both the students and their respective institutions (Arends-Tóth & Van de Vijver, 2004; Galchenko & Van de Vijver, 2007; Hirshman, 1982). The inability of foreign students to adapt to American university teaching methods negatively influences such important educational outcome variables as: overall academic satisfaction (Charles & Stewart, 1991), the application of business skills (Shackleton & Ali, 1990), the employment of professional success attributes in the workplace (Shackleton & Ali, 1990), and the retention and recall of theoretical principles for further study in graduate academic settings (Henderson & Shibano, 1990).

This paper addresses significant empirical and theoretical issues in cross-cultural student assimilation. The first goal is to empirically ascertain whether culture has a significant effect on individual values (as proposed by Hofstede in 1980). The second issue is to empirically determine whether these values, manifested in two U.S.-based sojourner student groups (Japanese and Colombian), are more closely aligned with their modern cultural (the Anglo-dominated US culture) or their traditional cultures (Japanese or Colombian). The third aim is to empirically establish which of these two cultures of students adapt more easily, the Hispanic (Colombian) international students or the Asian (Japanese) international students. The final objective is to determine whether the foreign students' level of cultural adaptation or retention affects their perceptions of important educational outcome variables.

Whereas past studies have been content to simply identify the differences that exist between cultures (Chance, 1965; Gordon, 1964, 1978; Meade, 1970; Padilla, 1980; Shackleton & Ali, 1990; Wong-Rieger, 1982, 1984), this study seeks to show how these differences impact international students. By determining which cultural dimensions adapt more readily to a new cultural environment, management professors should successfully augment their instructional effectiveness to meet the needs of all the students in a multicultural classroom.

LITERATURE REVIEW

Culture

Few concepts in anthropology have as many different and competing definitions as culture. One of the most accepted definitions of culture comes from Kroeber and Kluckhohn (1952):

Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment of artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values.... (p. 181)

Culture is just beginning to be accepted as an observable, tangible aspect of human behavior manifested in social interactions, but resting on symbolic frameworks, mental programs and conceptual distinctions in people's minds. The literature indicates that people react differently when interacting with members of other cultures than they do with members of their own culture (Bochner & Perks, 1971; Nesdale & Mak, 2003; Shaw, 1990). Personal differences are often exaggerated and disagreements consistently occur when members of diverse cultures are repeatedly confronted with interpersonal situations (Pulakos & Wexley, 1983). During international exchanges, barriers to communication and misunderstanding are more likely to arise when dealing with intercultural behavior (Graham, 1985). The misconceptions that occur between people of different cultures are due to their divergent cognitive views of the world and society (Shaw, 1990). The impact of these cultural differences on perceptions and cognitive views can be attributed to deeply manifested, culturally-specific values.

Values

Values have been the most heavily researched cultural constructs in the international literature (Nicholson, 1991). According to Kluckhohn and Strodtbeck (1961), values are the central tenets of culture. They define a value as that which is explicitly or implicitly desirable to an individual or group; and which influences the selection from available modes, means and ends of action. Values are held both consciously and unconsciously (Kluckhohn & Strodtbeck, 1961). Brown (1976) describes cultural values as conceptualizations that define what is right or wrong, or motivational drives that specify preferences. In general, cultural values are: (1) Something that is shared by all or most members of social groups; (2) Something older members try to pass on to younger members; and (3) Something, as with morals, laws and customs, that shapes behavior or structures one's perceptions of the world (Brown, 1976).

Empirical research on cultural values

Cross-cultural investigations of values have sparked an ongoing debate between those who believe that educational issues are governed by universal principles, the 'culture-free' approach; and those who argue that these situations are governed by a relative culture, the culture-specific thesis (Shackleton & Ali, 1990). A seminal study from the culturalist perspective was conducted by Hofstede (1980, 1980a). Hofstede collected data from over 100,000 IBM employees located in 40

different countries in an empirical search for the value dimensions over which cultures vary. Through a factor analytical treatment of country value measures, Hofstede derived four cultural dimensions related to basic anthropological and societal issues (Hofstede, 1980).

The first value dimension was labeled Power Distance. This was defined as "the extent to which the less powerful members of institutions and organizations accept that power is distributed unequally" (Hofstede, 1980, p. 45). The second value dimension was classified as Uncertainty Avoidance. This was defined as "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions to avoid them" (Hofstede, 1980, p. 45). The third value dimension was labeled Individualism versus Collectivism. One end of this bipolar continuum, Individualism, was defined as "the extent to which people look after only themselves and their family"; whereas, the other end, Collectivism, was defined as "a situation in which people belong to ingroups or collectives which are supposed to look after them in exchange for their loyalty" (Hofstede, 1980, p. 45). The final value dimension was labeled Masculinity-Femininity. Masculinity was defined as "a situation in which the dominant values in society are money, success, and things"; while Femininity was defined as "a situation in which the dominant values are caring for others and the quality of life" (Hofstede, 1980, p. 46).

The classifications of cultural values delineated by Hofstede (1980) have been examined repeatedly by other researchers (The Chinese Culture Connection, 1987, Ng et al., 1982; Hofstede & Bond, 1984; Shackleton & Ali, 1990) and further validation has been achieved. By locating these cultural values on a four factor map, this seminal work has enabled the operationalization of the complex construct of culture, and contributed to the foundation necessary to eventually build a theoretical structure for explaining cross-cultural differences (Bond & Forgas, 1984). Based on these empirical successes in a traditionally abstract area of analysis, Hofstede's dimensions are viewed as a valid instrument for the measurement of cultural values for the present study.

Dorfman and Howell (1988) refined Hofstede's cultural scales, bringing them from the ecological level of analysis to the individual level of analysis. They enhanced the construct validity of the measurement instrument and established improved reliabilities on each individual value scale (Nicholson, 1991). In their study, the Cronbach's Alpha coefficient for the value scales range from a low of 0.57 for Individualism-Collectivism to a high of 0.78 for Masculinity-Femininity. Because Dorfman and Howell's (1988) culture scales provide one of the more refined and valid measures of the cultural value dimensions, this scale is employed for the present study.

Values and Educational Outcomes

The educational importance of recognizing and understanding these value differences lay directly within the educational experience itself. For instance, a student who is highly individualistic may have inherent problems with group projects; or a student who has a high power distance may never approach a professor with a question, no matter how confused he/she may be. If a student's educational goal is to learn, and a professor's goal is to facilitate learning, then it is imperative that all barriers, tangible or intangible, be addressed and dealt with in order to enhance the learning process. Conflicting value structures are examples of these obstacles that could affect a student's educational experience and his/her post-educational life (Shaw, 1990).

In the current study, these post-educational issues are measured by specific outcome variables. Factors such as knowledge, skill, and professional orientation transcend any major and form the basis of the proposed educational outcome variables (AECC, 1990). These education outcome variables include: students' perceived satisfaction with their academic careers; students' perceived ability to apply their managerial skills; students' perceived ability to apply professional success attributes; and students' perceived retention and recall of theoretical principles. This study focuses on the effects of cultural assimilation and retention of these outcomes.

HYPOTHESES

Research has previously shown that other factors in addition to culture may significantly influence values (Chiswick, 1977; Hofstede, 1980; Wong-Rieger & Quintana, 1987). These values include: gender, age, type of school attending (i.e. regional vs. national vs. junior college), and international exposure. Although these variables may have an influence on value adaptation, this effect should be quite minor. According to Laurent (1986), culture has three times more influence on the shaping of educational assumptions and values than any other personal or situational characteristics. Even with this empirical evidence, it is important to include these independent variables in any cultural analysis so we can truly pinpoint the effect of culture. So, although we fully expect culture to have a greater effect than gender, age, school type and international exposure, these factors must be included in our analysis. Thus, based on the predicted effects of the independent variable (culture) on the dependent variables (the four value dimensions), the first and second hypotheses are derived.

- H1:** Membership in the Japanese student, U.S. student or Japanese international student cultures will have a significant influence on the variation of Hofstede's four values: power distance, uncertainty avoidance, individualism-collectivism and masculinity-femininity.

- H2:** Membership in the Colombian student, U.S. student or Colombian international student cultures will have a significant influence on the variation of Hofstede's four values: power distance, uncertainty avoidance, individualism-collectivism and masculinity-femininity.

Wong-Rieger and Quintana (1987) posited that Asians seemed to maintain a strong ethnic orientation even when relocated and exposed to the effects of another culture (not just the United States). Due to the homogenous nature of their respective cultures, when placed in foreign lands, Asians tend to seek out people who are most similar to them and form many Eastern sub-cultures within a given dominant culture. The numerous Chinese “ghettos” or “Chinatowns” around the world stand as a true testament to the strength and pervasiveness of this culture. In many conceptual evaluations, researchers have marveled at the ability of Japanese companies to get US workers to play by "Japanese Rules" (Adler, 1996). Their position was strongly reinforced by empirical evidence when they discovered that in Oklahoma, Southeast Asians were far less assimilated than their Hispanic counterparts (Wong-Rieger & Quintana, 1987). Wong-Rieger and Quintana's (1987) empirical study provides the foundation for the third hypothesis.

- H3:** The Colombian international students will become more assimilated to the U.S. culture than the Japanese international students.

Subsequent to these interactions, it is proposed that the level of value retention or assimilation will directly affect the perceptions of educational outcome variables of the Colombian-sojourners and the Japanese sojourners. As previously stated, these educational outcome variables include students' perceived: satisfaction with their academic careers; ability to apply their managerial skills; ability to apply professional success attributes; and retention and recall of theoretical principles. According to Berry (1990) and Sam (2001), the difficulties encountered by international students during their cross-cultural educational experience are compounded by the assimilation process and their inherent need to maintain their cultural identity.

In an ideal world, educational outcome factors would be equally achievable by both foreign and domestic students regardless of the cultural adaptation that takes place. However, because divergent cultural values act as a perceptive screen between the international student and American instructional methods (Pulakos & Wexley, 1983; Shaw, 1990), it is proposed that the students who adapt at a higher level, or who don't have to adapt at all (i.e. Americans), will perceive their educational outcome factors in a more positive light. Those students who retain most of their traditional culture will regard their educational outcomes from a more negative perspective. These students will tend to see the educational values of the host country so different from their own that they will, in many cases, actually rebel.

This position is taken utilizing the culture shock literature and understanding that assimilation into a culture to the point where one can work within the tenets of the culture to gain what one needs out of the culture takes about 5 years (Adler 1996; Ferraro, 1995). Since most of these foreign students have been in the United States much less than this period of time, it is assumed that they will struggle to gain what they need from the American culture and thereby exhibit frustration. It is only over a period of time (approximately 5 years) that their frustration subsides and they become bicultural (Ferraro, 1995). The extension of the culture shock literature to foreign exchange students provides the logical basis and argument for the final hypotheses.

- H4:** Membership in the U.S., Colombian international or Japanese international cultures will have a significant influence on the variation of the four educational outcome variables: academic satisfaction; skill application; application of professional success attributes; and retention and recall of theoretical principles.
- H4a:** U.S. students will perceive the educational outcomes in the most positive light.
- H4b:** Colombian international students will perceive the educational outcomes in a more positive light than Japanese international students, but from a more negative perspective than U.S. students.
- H4c:** Japanese international students will view their educational outcomes from a more negative perspective than both the Colombian international students and the US students.

SAMPLING AND METHODOLOGICAL ISSUES

Sample

For this analysis, culture was operationalized using an individual's country of birth. The Japanese were represented by Japanese students in Japan and the Colombians by Colombian students in Colombia. The Japanese international students and the Colombian international students were represented by Japanese and Colombian students who had been studying in the United States for between two to four years. U.S. students were represented by American traditional students studying at a southeastern regional university.

The subjects used for this study across all samples were senior level business students enrolled in Managerial Policy classes in their respective institutions. Each of the samples had 35 subjects except for the Japanese sample which had 34. Missing values in these samples were identified and subsequently case-wise deleted. Descriptive statistics appear below in Table 1.

TABLE 1. DESCRIPTIVE STATISTICS

	CULTURES				
	American	Japanese	Colombian	Colombian International	Japanese International
n	35	34	35	35	35
National Schools	46%	91%	64%	46%	100%
Age: Over 20	54%	91%	41%	83%	86%
Female	60%	43%	47%	51%	46%
No International Experience	57%	40%	47%	40%	48%

Note. All subjects sampled across all cultures were business majors in their senior year of college. Thus, there was no variation on the “College Major” variable or the “School Year Classification” variable.

Instrumentation

In order to determine the level of assimilation of the Japanese and Colombian foreign students, their cultural values were directly compared against values of members of their traditional culture (Japanese and Colombian respectively) and against values of members of their present culture (American). Data for this study was collected through an anonymous questionnaire. The survey consisted of three separate sections. In the first section, demographic questions including age, gender, international exposure and school type were asked. The second section consisted of the

Dorfman and Howell (1988) cultural value scale. The final stage addressed each of the four educational outcome variables previously mentioned.

The questionnaire was developed in English and then translated into Spanish and Japanese by bilingual associates. Both versions were then back-translated into English by separate bilingual associates. The back-translated survey was then compared to the original English version to ensure that any cross-cultural biases or misinterpretations were eliminated (Brislin, 1970).

Analyses

Three separate MANCOVA'S were run, one for each cultural analysis: the Japanese cultural analysis; the Colombian cultural analysis; and one to test the effects of cultural assimilation on the four aforementioned educational outcome variables. The effects of gender, age, school type, and international exposure were controlled by using these variables as covariates. Again, their employment as control variables has been empirically validated by Chiswick (1977), Hofstede, (1980), and Wong-Rieger and Quintana (1987).

RESULTS

The general premise guiding this research (and directly stated in Hypotheses 1 and 2) was that there would be a significant relationship between culture and Hofstede's four values for both cultural samples. Due to this guiding proposition, the relationship of culture and the covariates to each of Hofstede's variables for both analyses were examined.

Japanese Cultural Analysis

For the Japanese analysis, culture was significant at the overall level, as well as at the univariate level when directly tested for each cultural dimension: Masculinity-Femininity, Individualism-Collectivism, Power Distance, and Uncertainty Avoidance (see Table 2 below). Even though the subjects' school type (national or regional institution) had an overall effect, only the Masculinity/Femininity dimension was significantly affected by this covariate. The subjects' age also affected the Masculinity/Femininity Dimension. All analyses were done at the 0.05 level of significance

TABLE 2. JAPANESE INTERNATIONAL STUDENT ANALYSIS

OVERALL MANCOVA RESULTS:	F-Statistic	p-value
Culture	148.87	0.00
Age	2.37	0.06
School Type	3.03	0.02
Gender	0.57	0.69
International Exposure	0.97	0.65
UNIVARIATE ANCOVA RESULTS:		
<i>Individualist/Collectivist:</i>		
Culture	237.36	0.00

Age	0.47	0.49
School Type	3.61	0.06
Gender	0.65	0.42
International Exposure	0.78	0.38

<i>Uncertainty Avoidance:</i>		
Culture	284.99	0.00
Age	0.00	0.98
School Type	0.27	0.61
Gender	0.14	0.71
International Exposure	0.69	0.41
<i>Power Distance:</i>		
Culture	143.45	0.00
Age	0.00	0.19
School Type	0.27	0.85
Gender	0.14	0.34
International Exposure	0.69	0.53
<i>Masculinity/Femininity:</i>		
Culture	40.10	0.00
Age	7.46	0.01
School Type	8.25	0.00
Gender	0.36	0.55
International Exposure	0.09	0.77

A look at the pairwise comparisons shows significant differences between the Japanese students and the American students on all four of the cultural dimensions (see Table 3 below). Of these cultural dimensions, the Japanese international students are in accordance with the American students on Uncertainty Avoidance and Power distance, while lining up with the Japanese on Individualism-Collectivism. Regarding Masculinity/Femininity, the Japanese international students are significantly more masculine than even their Japanese counterparts, who are, in turn, significantly more masculine than the American students.

TABLE 3. PAIRWISE COMPARISONS FOR JAPANESE INTERNATIONAL STUDENTS

	CULTURES		
	American	Japanese	Japanese Int'l
Individualism/Collectivism	1.38 ^b	4.11 ^a	4.04 ^a
Uncertainty Avoidance	1.92 ^b	4.02 ^a	1.80 ^b
Power Distance	1.81 ^b	3.65 ^a	1.76 ^b
Masculinity/Femininity	2.29 ^a	1.72 ^b	1.50 ^c

Note. ^{a, b, c} Numbers followed by the different letters indicate significant differences.

Colombian Cultural Analysis

In the Hispanic study, culture also accounted for a significant amount of the overall variance across all four of the cultural dimensions (see Table 4 below). The subjects' international exposure was also significant in the overall test; however, in univariate testing, it only had a significant effect on the Masculinity/Femininity dimension. In addition, while the covariates of age and gender accounted for a significant amount of the variance for the Individualism/ Collectivism dimension, they were not significant in the overall test.

TABLE 4. COLOMBIAN INTERNATIONAL STUDENT ANALYSIS

OVERALL MANCOVA RESULTS:	F-Statistic	p-value
Culture	138.15	0.00
Age	1.70	0.16
School Type	1.33	0.26
Gender	1.71	0.16
International Exposure	3.01	0.02
UNIVARIATE ANCOVA RESULTS:		
<i>Individualist/Collectivist:</i>		
Culture	479.33	0.00
Age	4.15	0.04
School Type	3.11	0.08
Gender	3.84	0.05
International Exposure	1.47	0.23
<i>Uncertainty Avoidance:</i>		
Culture	301.61	0.00
Age	2.26	0.14
School Type	0.42	0.52
Gender	0.83	0.37
International Exposure	2.34	0.13
<i>Power Distance:</i>		
Culture	343.66	0.00
Age	2.63	0.11
School Type	3.15	0.08
Gender	0.86	0.36
International Exposure	3.43	0.07
<i>Masculinity/Femininity:</i>		
Culture	166.06	0.00
Age	0.22	0.64
School Type	0.00	0.95
Gender	1.57	0.21
International Exposure	4.48	0.04

Pairwise comparisons for the Colombian study also delineated significant differences between Colombian students and the American students on all four cultural dimensions (see Table 5 below). The Colombian international students assimilated to the American culture on the Individualism/Collectivism, Power Distance, and Uncertainty Avoidance dimensions. However, they fell right in the middle of the Americans and Hispanics on the Masculinity/Femininity dimension, significantly different from both. In other words, the Colombian international students are significantly more feminine than the American students and significantly more masculine than their traditional Colombian counterparts.

TABLE 5. PAIRWISE COMPARISONS FOR COLOMBIAN INTERNATIONAL ANALYSIS

	CULTURES		
	American	Colombians	Colombians Int'l
Individualism/Collectivism	1.38 ^b	4.45 ^a	1.63 ^b
Uncertainty Avoidance	1.92 ^b	4.52 ^a	1.81 ^b
Power Distance	1.81 ^b	4.41 ^a	1.76 ^b
Masculinity/Femininity	2.29 ^c	4.61 ^a	3.79 ^b

Note. ^{a, b, c} Numbers followed by the different letters indicate significant differences.

Educational Outcomes

For the final analysis, a MANCOVA was run to determine the effect of cultural assimilation on the four pre-stated educational outcome variables: students' perception of academic satisfaction; students' perception of their ability to apply skills; students' perception of their ability to apply professional success attributes; and students' perception of their ability to retain and recall theoretical principles at later dates. In this analysis, culture was significant at both the overall and univariate level of analysis for all four educational outcomes (see Table 6 below). International exposure was also significant at the overall level of analysis, however, it accounted for a significant amount of the variance for the application of Professional Success Attributes, and the Retention and Recall of Theoretical Principles. Also significant at the univariate level, was school type for Academic Satisfaction and Skill Application, and age for Skill Application. As with the previous two MANCOVAs, all analyses were done at the 0.05 level of significance.

TABLE 6. EDUCATIONAL OUTCOME ANALYSIS

OVERALL MANCOVA RESULTS:	F-Statistic	p-value
Culture	23.18	0.00
Age	1.60	0.16
School Type	12.37	0.06
Gender	0.40	0.81
International Exposure	2.66	0.04

UNIVARIATE ANCOVA RESULTS:		
<i>Individualist/Collectivist:</i>		
Culture	46.15	0.00
Age	0.30	0.58
School Type	3.82	0.05
Gender	1.32	0.25
International Exposure	0.00	0.95
<i>Uncertainty Avoidance:</i>		
Culture	60.93	0.00
Age	5.36	0.02
School Type	4.24	0.04
Gender	0.01	0.91
International Exposure	3.73	0.06
<i>Power Distance:</i>		
Culture	48.62	0.00
Age	0.26	0.61
School Type	1.27	0.26
Gender	0.02	0.87
International Exposure	4.40	0.04
<i>Masculinity/Femininity:</i>		
Culture	71.17	0.00
Age	2.05	0.16
School Type	0.13	0.72
Gender	0.02	0.89
International Exposure	4.15	0.04

The pairwise comparisons of this study derived significant differences across the educational outcome variables for the three cultures sampled (see Table 7 below). Across all four of the educational outcome variables: academic satisfaction, skill application, application of professional success attributes, and retention and recall of theoretical principles; the Colombian international students scored significantly higher than both the American and Japanese international students. The American students were significantly lower on three of the four categories than both of their sojourner counterparts, while the Japanese international students were right in the middle on all of the dimensions.

TABLE 7. PAIRWISE COMPARISONS FOR EDUCATIONAL OUTCOME ANALYSIS

	CULTURES		
	American	Colombian Int'l	Japanese Int'l
Academic Satisfaction	2.05 ^c	3.86 ^a	3.04 ^b
Skill Application	2.57 ^b	4.09 ^a	3.10 ^b

Professional Success Attributes	2.33 ^c	3.98 ^a	3.00 ^b
Retention and Recall	2.19 ^c	4.14 ^a	3.07 ^b

Note. ^{a, b, c} Numbers followed by the different letters indicate significant differences.

DISCUSSION

Based on these results, both hypotheses number 1 and number 2 are confirmed. These hypotheses state that culture would have an overall and direct effect on Hofstede's four cultural value dimensions: Individualism/Collectivism; Uncertainty Avoidance; Masculinity/Femininity; and Power Distance. Based on the results from the first two MANCOVAs (Table 2 and Table 4) culture had significant overall effects, and a direct effect on all of Hofstede's values. Therefore, for all five sets of students sampled, across both analyses, culture significantly influenced the subjects' individual values.

To determine whether hypothesis number 3 was supported, the pairwise comparisons for both analyses must be examined and then compared (Table 3 and Table 5). For the Japanese analysis, the Japanese international students adapted to the American student culture on two of the cultural continuums, Uncertainty Avoidance and Power Distance, while scoring close to their traditional Japanese counterparts on the Individualism/Collectivism and Masculinity/Femininity scales. The Colombian internationals fully adapted across all the dimensions except Masculinity/Femininity, where they scored in between the Americans and Japanese. Because hypothesis number 3 basically states that the Colombian internationals would adapt across more dimensions than the Japanese internationals, this hypothesis was also fully supported.

The final hypotheses state that culture would have a significant impact on the four educational outcome variables (academic satisfaction; skill application; application of professional success attributes; and recall of theoretical principles) and this influence would significantly affect the perception of these outcomes by the sampled students. In Table 6, the results indicate that culture had a significant overall and direct effect on the four stated outcome variables. Thus, hypothesis number 4 is directly supported.

The three sub-hypotheses, H4a, H4b, and H4c, predicted how positive each of the student cultures sampled would perceive the educational outcome variables. It was proposed, that because the Americans did not have to culturally assimilate to US university instruction, they would view the dependent variables in the most positive light, when compared to the other two sampled student groups. It was also proposed that because the Colombian internationals were hypothesized to be more assimilated than the Japanese internationals, they would perceive the educational outcomes more positively than the Japanese internationals, but more negatively than the American students.

The results of the final sub-hypotheses were the most startling results of this study. Table 7 illustrates the pairwise comparisons upon which these hypotheses are examined. Surprisingly, the Colombian international students perceived all four educational outcomes in a more positive light than the other two groups. In addition, the Japanese internationals scored significantly higher than the American

students on all of the dimensions except Skill Application, where their higher score was not significant. Therefore, none of the directional hypotheses (H4a, H4b, and H4c) were supported.

Because this study measured **perceptions** of educational outcomes, it could be conceived that maybe there is a greater cognitive dissonance level with internationals than with the Americans. The international students probably perceive that they would be much worse off in their home countries without their education, thus making them more appreciative and cognizant of the education's value. In the U.S., the opportunity to earn a higher-level education always exists, so the perception of its benefits may not be as powerful as in other countries, where the universities are scarce, the demands and prices are high, and their standards are unattainable by most of the population. This also increases the appreciation of an education, and minimizes the dissatisfaction that may occur in overcoming obstacles toward a college degree. In summary, although the order of the students' perceptions of the educational outcomes was not correctly predicted, it can be easily explained and understood within the cognitive context of the students' college experience.

CONCLUSION

This study demonstrates that although culture has an effect on student assimilation and their perception of educational outcome variables, it may not necessarily be a negative one. Although numerous individuals have cried out for the integration of culturally-sensitive instructional methods in the business curriculum, this study clearly illustrates that international students' are quite satisfied with their education. While the level of cultural assimilation did have an effect on outcome satisfaction (i.e. Colombian internationals were more satisfied than Japanese internationals), it is the American students dissatisfaction with their education that universities will have a difficult time explaining.

More studies in this area should be conducted to provide additional evidence and context of the present study's findings. Only by varying nationalities, cultural values, covariates, or sample sizes can the full relationship between culture and educational effectiveness be determined. These avenues provide exciting opportunities for researchers who look to empirically study variables in a field that is still in its infancy.

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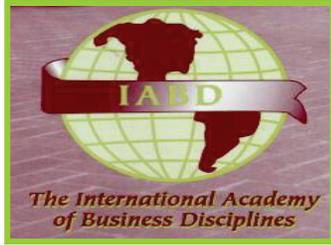
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