Culture Distance and Cultural Dimensions in Diverse ELT Environments: 
A Quantitative Investigation

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Bioprofile
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Abstract
As societies become increasingly diverse, there is a corresponding rise in cross-cultural contact, particularly in educational environments. In Japan, international teachers are frequently recruited to teach English to Japanese students, raising questions about the impact of culture distance on this educational encounter. This paper describes a quantitative investigation, which used the Cultural Dimensions of Learning Framework (Parrish & Linder-VanBerschot, 2010) to examine culture distance by comparing the cultural learning preferences of 119 Japanese EFL students and 24 native English-speaking teachers (NESTs) at various universities in Japan. No strong preferences were discovered among either group for preferences categorized as epistemological beliefs or temporal perceptions, while strong preferences were discovered among both groups for preferences categorized as social relationships. Although statistically significant differences were discovered in preferences categorized as social relationships, epistemological beliefs, and temporal perceptions, practical significance was small. These findings both challenge and support depictions of Japanese students and NESTs in academic literature, and suggest a significant number of shared meanings between the two groups in this study. Therefore, the author concludes that the culture distance between these two groups may not be as large as the research suggests, while acknowledging that both groups may have adjusted to each other’s teaching / learning styles. The study illustrates the inherent difficulty in conceptualizing and operationalizing culture distance, particularly through “essentialist” frameworks constructed in a Western context.

Keywords: culture distance; cultural dimensions of learning; Japanese EFL students

Introduction
According to Ward, Bochner, and Furhnam (2005, p. 4), “Contact between culturally diverse individuals is as old as recorded history”. However, jet travel, the globalization of industry, expanding educational opportunities, together with increased affluence and tourism have led to a “quantum increase” in the movement of people across national and ethnic borders (Ward et al., 2005). This phenomenon is resulting in societies that are multi-ethnic and multi-layered (Jackson, 2011; Lucić, 6-46 Ikebirakicho, Nishinomiya, Hyogo 663-8558, Japan
business environments that are multi-cultural (Jiang, Chua, Kotabe, & Murray, 2011), and international organizations that are becoming increasingly diverse (Jackson, 2011; Yagi & Kleinberg, 2011). Japan is not immune to this phenomenon.

Despite a long history of state ideology promoting the desirability of cultural homogeneity in Japan (Willis & Murphy-Shigematsu, 2008), Japanese society is becoming increasingly diverse. The Statistics Bureau of Japan (2017) reported that although only 1.7% (2.2 million) of Japan’s population is foreign born, that number is rising dramatically due, in part, to the government’s desire to increase immigration and mitigate Japan’s population decline (“Mizuho Economic Outlook,” 2018, July 25). Furthermore, Japanese companies are increasingly demanding internationally-minded employees to increase Japan’s global competitiveness (Mori, 2010), and the government is anxious to sustain the country’s status as an affluent nation (Shimomura, 2013). Thus, Japanese people are being exposed to intercultural contact through ethnic groups living in Japan, and to “the meeting of individuals and groups who differ in their cultural, ethnic, or linguistic backgrounds” (Ward et al., 2005, p. 4).

Not surprisingly, Japan’s educational system is becoming increasingly diverse. For over three decades, the Japan Exchange and Teaching Programme (JET), in its efforts to promote “grass-roots internationalization” (JET, 2015), has recruited over 70,000 college graduates from 75 countries, to participate in foreign language education at local government offices, elementary, junior, and senior high schools, and Boards of Education. Japan’s Ministry of Education is hoping that the continued recruitment of Assistant Language Teachers (ALTs) (many of whom came to Japan on the JET Programme) will continue to enhance students’ English language proficiency (MEXT, 2011). These ALTs, because they are native English speakers, are perceived as providing valuable opportunities for authentic practice (MEXT, 2011) and improving English language education in general through international exchange (JET, 2015). Furthermore, given the sharp decline in Japan’s population, the government has prioritized the internationalization of Japanese higher education by attracting large numbers of international students and faculty and offering degree courses taught in English (Huang, 2014). Measures are also being taken to incentivize Japanese students to study overseas, including the enhancement of their English language proficiency, which is seen as essential for successful study abroad (Shimomura, 2013). Tanabe and Mori (2013) have reported that many Japanese university EFL students currently study English with Native English Speaking Teachers (NESTs), who, based on Hofstede, Hofstede & Minkov’s (2010) cross cultural analysis, differ considerably from Japanese students in terms of cultural dimensions and value orientations.

It is worth investigating this educational encounter, as contact between culturally diverse individuals can have both positive and negative outcomes, yielding potential insights with broad international relevance. For instance, Sevilla (2018) has warned of potential moral conflicts that may arise due to a “cultural-moral difference” (p. 33) when people from different cultures come into contact, as some may
be morally affronted by the practices of their cultural others. In addition, Neuliep (2018) has asserted that the extent of culture shock is significantly influenced by the degree of similarity between host and native cultures. A considerable body of research has thus focused on the impact of culture distance and differing value orientations on intercultural contact. Therefore, this paper describes an investigation into culture distance in Japan’s language classrooms by comparing the cultural learning preferences of 119 Japanese university students and 24 NESTs at various universities in Japan. Two research questions were examined: (1) What are the cultural learning preferences of freshman Japanese university students and NESTs? and (2) How do these two groups differ in terms of cultural learning preferences? These questions were approached through the quantitative lens of cultural dimensions in an effort to avoid binaries and instead capture the complexity of culturally-based approaches to learning. This study has the potential to inform other cross-cultural encounters in Japanese schools, as Japanese society becomes increasingly diverse.

**Literature Review**

As societies become more diverse, so too do learning environments. As a result, calls for the consideration of culture in multi-cultural learning environments are increasing (Hunt & Tickner, 2015; Parrish & Linder-VanBerschot, 2010). This is because of concern over conflicts students may experience due to a potential clash of teaching and learning styles (Nisbett, 2003). In its Spring 2016 Global Attitudes Survey, which examined attitudes towards education in 19 countries, the Pew Research Center discovered considerable discrepancies in educational values throughout the world and a lack of consensus on the most effective educational approaches (Silver, 2017, August 28). Hunt and Tickner (2015) have lamented that the development of inclusive pedagogical approaches that address cultural diversity has not kept pace with the rapid increase in cross-cultural learning situations. Some have framed culturally-responsive instruction as a matter of ethics and social justice, as it is perceived as validating students and optimizing their potential as human beings (Shevalier & McKenzie, 2012).

**Culture Distance**

**Value orientations.** One approach to conceptualizing culture distance is through the lens of value orientations. Grove (2015b) has defined *orientation* as a group’s overall tendency to align with a particular set of meanings (behavior, emotions, events, time, etc.), and *value orientation* as a preference for a particular set of values. Interculturalists, according to Grove (2015b), seek to explore central tendencies or similar behaviors commonly practiced by most members of a group rather than to describe the characteristics of a specific group member or to delineate the behavior of all members of a group. Therefore, the term *dimension* is commonly used to represent value orientations along a continuum. This point is explored further below. *Culture distance* has thus been defined as “the degree to which interacting people share meanings . . . [and] . . . the fewer meanings that are mutually shared, the greater is the culture distance” (Grove, 2015b, pp. 195-6). Based on this idea, Grove (2015b) posited that two people raised in the same place and educated in the same schools will likely share a set of value
orientations, while two people raised in different ethnic, religious, or cultural contexts are less likely to share similar value orientations.

In comparing East Asian and Western societies, Varnum, Grossmann, Kitayama, and Nisbett (2010) have argued that although there are large geographic, genetic, and linguistic differences between these two regions, the driving force behind cultural differences in cognition is differences in social orientation, or the extent to which societies are independent or interdependent. University of California Professor John Schumann proposed the concept of social distance, or “the cognitive and affective proximity of two cultures” (as cited in Brown, 2014, p. 188), as a factor in second language learning and postulated that the greater the social distance between language learners and teachers, the more difficulty learners have in acquiring proficiency. However, Hemmasi and Downes (2013) have posited that cultural adjustment is more successful when there are large differences in individualism between home and host cultures, a phenomenon termed the Cultural Distance Paradox. Hemmasi and Downes (2013) have also argued in favor of the Asymmetry Hypothesis, which suggests that greater adjustment is achieved when people from individualist societies travel to collectivist societies than vice versa. Thus, Brown (2014) problematized the subjective nature of “social distance” and the inherent difficulty in measuring it empirically.

**Culture distance through other lenses.** Various other attempts have been made at conceptualizing and operationalizing culture distance. Anthropologist and international business relationships consultant Edward T. Hall introduced the idea of high and low context cultures, in which the former involves implicit, nuanced communication, which is situational, and based on shared understandings, while the latter relies on explicit linguistic codes (Hall & Hall, 1990). Cross-cultural business consultant, Richard D. Lewis argued that “thought can be regarded as internalized language” (p. 11), and suggested that speakers of different languages engage in a variety of thought processes that are connected with the languages they speak (Lewis, 2006). Social psychologist, Richard Nisbett (2003), has attributed the intellectual inheritance of many Western cultures to Ancient Greece, and that of East Asian cultures (including Chinese, Korean, and Japanese) to Ancient China. He has characterized much of Western thought as analytic and reliant on categorization, formal logic, and analysis of discrete phenomena, and East Asian thought as holistic, which involves more contextualized world views, making fewer sharp distinctions among attributes or categories, and dialectical thinking (the ability to perceive value in seemingly contradictory points of view). Grove (2015a) has also suggested that Asians tend to view the world through a wide-angle lens because of their propensity to view items in their overall situational context, while Westerners tend to utilize tunnel vision because of their inclination to attend to the most salient items in discrete, separate categories. Nisbett (2003) has thus argued that human cognition is not universal, and that people differ greatly in their worldviews, attitudes and beliefs. Understanding these differences, according to Nisbett (2003) is key to facilitating harmony between Eastern and Western cultures.
Japanese cultural values and learning. One example of culture distance in education is evident in White’s (1987) juxtaposition of Japanese and American educational values. According to White (1987), American education prioritizes competition, individualism, and personal achievement, while the focus of Japanese education is interdependence, harmony, and human relationships. White (1987) has also observed that, in Japan, the virtues of ganbaru (persistence), gaman suru (the ability to deal with hardship), amaeru (dependency), and sunao (obedience) are essential to being an ii ko (good child). Winning or losing is less important in Japan than the ability to persist and keep struggling (ganbaru). Dealing with Japan’s intensive examination-based system, and the subsequent, grueling working hours of employees at Japanese companies requires the ability to deal with hardship (gaman suru). The Confucian value of hard work is deemed essential to achievement in Japanese education, and White (1987) has stated that “If anything comes easily in Japan, it does not confer virtue . . . [and] the ability to commit intense effort to a task and . . . devotion to hard work is the mark of virtue” (p. 13). White (1987) has also asserted that, in Japanese education, dependence (amaeru) and obedience (sunao) are regarded as essential to producing cooperative group members who can work effectively with others. The ability to devote intense effort and dedication to a task is highly valued and is encapsulated in the Japanese word, benkyo (study). These values, according to White (1987), are central to education in a culture which prioritizes group identity and conformity but may seem alien to a Western mind.

Culture distance and cultural dimensions. Another approach to conceptualizing and operationalizing culture distance is through the lens of cultural dimensions, as they are not intended to delineate the behavior of all members of a group, but rather to search for central tendencies practiced by most members of the group (Grove, 2015b). Hofstede, et al. (2010) have defined a dimension as “an aspect of a culture that can be measured relative to other cultures . . . [and] groups together a number of phenomena in a society that were empirically found to occur in combination” (2010, p. 31). Grove (2015b) claimed that using dimensions as a framework for analysis is advantageous as there are gradations along the two poles of each dimension, allowing researchers to determine the extent to which individuals in a group are oriented towards one pole or another. Thus, viewing culture distance through the lens of cultural dimensions, which represent value orientations along a continuum, offers the potential for assigning quantitative values as a basis for comparison. Cultural dimensions have been used by Kluckhohn and Strodtbeck (1961) in their Values Orientation Theory, Trompenaars and Hampton-Turner (2012) in their Model of National Culture Differences, and in The GLOBE Study of 62 Societies (House, Hanges, Javidan, Dorfman, & Gupta, 2004). One of the most utilized models in comparing national cultures in academic research has been Hofstede’s Cultural Dimensions Theory (Arenas et al., 2011; Tapanes, Smith, & White, 2009).

Hofstede’s Cultural Dimensions Theory originated in the 1970s and originally characterized national cultures in terms of four cultural dimensions that could explain national differences in work-related values, behavioral expectations, and beliefs (Minkov & Hofstede, 2011). These were power
distance (PDI), individualism-collectivism (IDV), masculinity-femininity (MAS), and uncertainty avoidance (UAI). Since then, two more dimensions have been added: long-term orientation (LTO) and indulgence-restraint (IVR) (Hofstede et al., 2010.). Of these dimensions, the one that has been most commonly studied in online cross-cultural learning situations is the individualism-collectivism (IDV) dimension (Tapanes, et al., 2009). Grove (2015b) reported that because of its pervasiveness, the individualism and collectivism dimension has been proposed as the dimension that underlies all others, and as such, has been termed “the grand dimension” (p. 199). The individualism and collectivism dimension also reflects social orientation, which Varnum et al. (2010) have identified as the main driving force behind cultural differences in cognition.

Hofstede (1986) recommended this theoretical framework for the study of cross-cultural learning situations, and suggested that each of these dimensions affects the way students approach learning and teachers approach teaching. Hofstede et al.’s (2010) quantified differences in individualism / collectivism (IDV), power distance (PDI), masculinity / femininity (MAS), uncertainty avoidance (UAI), long term orientation (LTO), and indulgence / restraint (IVR) for Japan and the home countries of the majority of ALTs on the JET Programme (JET, 2015) are summarized in Table 1. If accurate, this data illustrates notable differences in cultural dimensions between Japan and many of these countries, raising the possibility of significant culture distance between Japanese students and teachers from these countries in EFL classrooms.

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Research on Cross Cultural Learning

Given the prevalence of Japanese students studying English as a foreign language in classes taught by Native English-Speaking Teachers (NESTs), and the increasing diversity of learning environments internationally, it is worth exploring the impact of culture distance on cross-cultural learning. Hofstede et al. (2010) have postulated that values are the deepest layer of culture and are the least susceptible to change, and Jung, Kudo, and Choi (2012) have cautioned that it is essential to give due consideration to culture when importing pedagogical and instructional innovations from the West into Asian contexts. In a study of Japanese university students in an online, collaborative, English-medium learning environment, Jung et al. (2012) discovered significant stress among the students, which they attributed to anxiety about English proficiency as well as a cultural mismatch between students’ learning preferences and the instructional environment. They also noted that teacher-centered learning environments and high-context communication are preferred by Japanese students, both of which were absent from the online learning environment. Jung et al. (2012) further observed that lack of clear, specific guidelines led to increased stress among students, which they attributed to their high uncertainty avoidance (UAI). The potential for culture clashes was also investigated by Chen and Bennett (2012) in an investigation of Chinese university students taking online courses from an Australian university. Findings indicated a stark contrast between the previous educational beliefs of the Chinese students and the constructive learning environment of the Australian university, which in turn led to acculturative stress and negative educational outcomes. In addition, based on a study conducted in Malaysia, Kesevan (2018) opined that a discrepancy sometimes exists between classroom expectation of students and the assumptions of expatriate, native-speaking teachers.

Other studies have also attributed difficulties in learning environments to differences in Hofstede’s cultural dimensions. According to Tapanes et al. (2009), individualist instructors in online learning environments were perceived, by collectivist, ambiguity-intolerant students, as lacking in awareness and consideration of cultural differences. This study also revealed lower motivation and more negative experiences among the collectivist, ambiguity-intolerant students than among their individualist, ambiguity-tolerant peers in the same program. In a study of a two-year blended Master’s course in Computers in Education, Cronje (2010) compared the experiences of South African professors (rated by Hofstede as relatively low PDI and UAI) and Sudanese students (rated by Hofstede as relatively high PDI and UAI). He found that the South African professors were more constructivist in their approach, and preferred to offer flexibility and freedom in assignments, with the goal of encouraging creativity. On the other hand, the Sudanese students’ preference was for direct, explicit instructions, and this was problematic for the professors.

The academic literature also contains studies of differing cultural dimensions (or culture distance) in classroom environments. One investigation, which examined the impact of culture on the learning
approaches of university accounting students in Japan, Belgium, and Australia, suggested that classroom reticence on the part of Japanese students could be attributed to their collectivism, relatively high PDI and UAI, and that this in turn negatively impacted their learning (Boland, Sugahara, Opdecam, & Everaert, 2011). The same study also revealed low PDI and UAI scores on the part of Belgian students, which appeared to positively impact their learning. In a study of international students at UK universities, Sulkowski and Deakin (2009) found that didactic teaching styles and reluctance to question teachers were preferred by students from East Asian cultures with high power distance, and that such students were hesitant to express their opinions openly in class. Sulkowski and Deakin (2009) attributed this finding to the greater value placed by collectivist students on their standing with peers than on individual achievement. They also contrasted the East Asian notion of success as resulting from the support of family, peers, and the wider society with the Western idea of success as an individualistic, ego-enhancing achievement. Similarly, Watkins and Biggs (1996) argued that the motivations of East Asian students are rooted in their support networks, while the motivations of Western students are often utilitarian in nature, as a route to get a good job or a high salary.

Japanese students and native English speaking teachers. Other research has examined educational encounters specifically involving Japanese students and native English speaking teachers (NESTs). Tanabe and Mori (2013), for example, have observed stress and anxiety among freshman Japanese university students taking EFL classes from NESTs. The students in this study rated their Japanese English teachers (JETs) more positively than the NESTs, and the authors speculated that this was because of greater use of Japanese in class and similar cultural and educational expectations (less culture distance) on the part of the JETs. High levels of foreign language anxiety, self-doubt, and fear of negative evaluation were also uncovered by Sim and Roger (2016) in an investigation of 101 Japanese university EFL students, factors deemed detrimental to language learning. In another study, the use of silence in EFL classes by Japanese university students was a source of misunderstanding and frustration between the students and NESTs (Harumi, 2011). Silence, according to Harumi (2011) is viewed positively in Japanese classrooms, as it is used as a strategy for saving face and avoiding confrontation, but it is often perceived negatively in Western classrooms as a sign of boredom, disinterest, or low motivation.

Controversy regarding existing approaches. There is some disagreement in the academic literature about juxtapositions of Western versus Asian approaches to learning, and on the notion that culture distance is necessarily problematic. As mentioned previously, Hemmasi and Downes (2013) have argued that there is the potential for greater mutual accommodation when there are large differences in individualism among cultures, a phenomenon referred to as the Cultural Distance Paradox. With regard to learning approaches, Hofstede et al. (2010) have said that the superior performance of East Asian students in mathematics and science, especially compared with their international peers, refutes the contention that East Asians over-rely on rote memorization as an approach to learning. Furthermore,
Watkins and Biggs (1996) argued that Confucian approaches to learning such as memorization and repetition, can in fact result in deep learning, a phenomenon they have termed the *Chinese Paradox*. Additionally, characterizations of students from Confucian Heritage Cultures (CHC) such as China, Vietnam, Singapore, Korea, and Japan, as passive, compliant learners, given to rote memorization, has been problematized by Tran (2013). According to Tran (2013), there is a stark contrast between how CHC students and Western students are depicted in the academic literature, with the latter often described as more active, independent, and questioning. The notion of culturally distinct learning behaviors among CHC students has also been problematized by O’Dwyer (2017), who suggested that researchers look elsewhere in the pursuit of insights into the learning approaches and challenges of students from different cultural backgrounds. Concerns such as the above have therefore led some to challenge the use of “essentialist” frameworks in investigating cross-cultural learning situations.

According to Goodfellow and Lamy (2009), “essentialist” frameworks are based on the questionable notion that individuals’ thoughts, values, and behaviors are “hardwired,” are shared by members of their cultural groups, and are determined by their cultural, geographic, historical, and linguistic backgrounds. Fougère and Moulettes (2007) have argued that frameworks which portray “individualistic” cultures as “more educated, more literate, more wealthy, . . . more equal, more questioning” (p. 11), impose an Anglo / North American / Australasian, English speaking lens on other cultures, and can therefore be regarded as ethnocentric. Jackson (2011) has advised against relying on a small number of universally applied value dimensions, based on simplistic cross-cultural comparisons, and has opined that Hofstede’s theory is inadequate for analyzing multi-layered, multi-influenced contexts. The notion of national uniformity, implied by Hofstede’s theory, has also been challenged by McSweeney (2002), who has posited that non-national and non-cultural forces also impact and shape societies. Even Hofstede (2011) has acknowledged that the dimensional paradigm may “represent subjective, reflective attempts to order a complex reality” (p. 5). That said, Bennett (2016) has suggested that subjective *culture*, or “the coordination of meaning and action of a group” (“Cultural Experience,” para. 2) offers useful insights into the complexities of worldviews. In their quest to avoid cultural stereotyping, people sometimes tend to focus on individuals rather than groups, but Bennett (2016) argued that this is another form of ethnocentrism, as it imposes a Western lens of individualism on broader cultural phenomena. The answer, according to Bennett (2016) is to replace cultural stereotypes with cultural *generalizations*, based on systematic, cross-cultural research, and to utilize predominant group tendencies as the unit of analysis.

**Cultural Dimensions of Learning**

The exponential increase in cross-cultural learning environments around the world and the accompanying need to engage in culturally sensitive pedagogical approaches led Parrish and Linder-VanBerschot (2010) to develop the Cultural Dimensions of Learning Framework (CDLF). Based on
the work of Hofstede and Hofstede (2005), Nisbett (2003), Levine (1997), Hall (1983), and Lewis (2006), the CDLF framework was designed to examine the complex relationship between culture, learning, and teaching. The CDLF framework delineates eight cultural dimensions, grouped into social relationships, epistemological beliefs, and temporal perceptions, which form the value basis for manifested learning and teaching behaviors. Challenging these behaviors, according to Parrish and Linder-VanBerschot (2010), may conflict with students’ underlying values. Therefore, Parrish and Linder-VanBerschot (2010) designed the Survey of Culturally Based Learning Preferences, also known as the CDLF Survey, to measure eight cultural dimensions of learning.

Social relationships dimensions, according to Parrish and Linder-VanBerschot (2010) include equality / authority, individualism / collectivism, and nurture / challenge. The equality / authority dimension reflects preferences for student-centered versus teacher-centered instructional environments, while the individualism / collectivism dimension incorporates preferences for students speaking up and expressing opinions versus reluctance to do so. Collaboration and modesty are associated with nurture, while competition, assertiveness, and the desire for excellence are associated with challenge. Epistemological beliefs dimensions include stability seeking / uncertainty acceptance, logic argumentation / being reasonable, and causality / holism. Learning behaviors such as structured learning, avoidance of ambiguity, and prioritizing “right” answers are categorized as stability seeking, while open-ended, process-based learning and acceptance of ambiguity are associated with uncertainty acceptance. Rational argumentation in the pursuit of “single truths” is an example of logic argumentation, while multiple truths and consensus building are the focus of being reasonable. Learning behaviors associated with causality include goal-setting and cause-effect relationships, while behaviors associated with holism, involve evolving, contextualized, situational knowledge. Temporal perceptions include clock time / event time, and linear time / cyclical time. Fixed start and end times and strict deadlines for instructional activities are the focus of clock time, while flexible timing and changeable deadlines is associated with event time. Careful time management, linear, sequential, future-focused goals are incorporated into the linear time dimension, while non-linear learning, adaptation to time, and appreciation of past learning is associated with cyclical time.

Some studies have used the CDLF to investigate learning preferences. For example, Bokhari and Panhwar (2014) investigated the relationship between multicultural learning styles and cultural dimensions, and the influence of cultural dimensions on academic performance among Pakistani MBA students in an online program. Epistemological beliefs and temporal perceptions were found to have a positive relationship with multicultural learning styles, while a negative relationship was discovered with social relationships. The study also found that academic performance was equally impacted by all three categories of cultural learning preferences. Sobodić, Balaban, and Tomašević (2017) examined the relationship between cultural dimensions of learning and perceptions of an e-learning system among Croatian undergraduate students. Although they did not find significant relationships, the findings...
revealed different preferences based on gender and on different fields of study. The CDLF survey was also used by Hunt and Tickner (2015) to investigate cultural dimensions of learning among students in an online teacher education course at a university in New Zealand. Although this study did not uncover any culture-based learning differences, the researchers attributed this to the lack of diversity in the sample, which was mostly female and of European ethnicity. However, Hunt and Tickner (2015) did acknowledge the potential usefulness of the CDLF in cultivating reflection and awareness among teachers and students with a variety of cultural learning preferences.

Methodology

The purpose of this study was to investigate culture distance in EFL classrooms by comparing the cultural learning preferences of freshman Japanese university students and native English speaking teachers (NESTs) from Western countries. The study posed two research questions:

RQ1: What are the cultural learning preferences of freshman Japanese university students and NESTs?

RQ2: How do freshman Japanese university students differ from NESTs in terms of cultural learning preferences?

Participants

Through the nonprobability approaches of convenience and snowball sampling, 119 freshman Japanese university students, 79 male and 40 female, taking required English classes, were recruited ($N = 119$) in the fall of 2016. All of the students were aged 18-19 years old, and had studied English for six years in junior high and high schools. Convenience and snowball sampling were also utilized to recruit 24 NESTs at various universities around Japan ($N = 24$). The NESTs were from countries where English is an official (or de facto) language including 13 from the United States, four from Canada, three from the UK, two from Ireland, and two from Australia. The sample of NESTs consisted of 21 males and three females, and all of them had lived and worked in Japan for over 10 years.

Instrument

The instrument used to collect data on the cultural learning preferences of Japanese students and NESTs was the \textit{Survey on Culturally Based Learning Preferences} (CDLF survey) developed by Parrish and Linder-VanBerschot (2010). Cronbach’s alpha was used to evaluate the internal consistency of this instrument, yielding a result of .74 (Bokhari & Panhwar, 2014). DeVellis (2011) has advised that ranges between .70 and .95 are considered appropriate. As mentioned previously, this 36-item instrument was designed to measure learning behaviors associated with cultural values. Eight cultural dimensions of learning were measured, categorized as social relationships, epistemological beliefs, and temporal perceptions, and participants were asked to indicate their level of agreement or disagreement with
opposing statements along continua from 1 to 10. Average scores for students and NESTs on each of the eight dimensions were then calculated. Based on the developers’ recommendations, responses of 1-3 were interpreted as a preference for the statement on the left, while responses 8-10 were interpreted as a preference for the statement on the right (Parrish & Linder-VanBershot, 2010). Responses ranging from 4-7 were interpreted as a lack of strong preference for either statement. Social relationships were measured by items 1-3 (equality / authority), items 4-7 (individualism / collectivism), and by items 8-12 (nurture / challenge). Epistemological beliefs were measured by items 13-18 (stability seeking / uncertainty acceptance), items 19-21 (logic argumentation / being reasonable), and by items 22-25 (causality / holism). Temporal perceptions were measured by items 26-29 (clock time / event time) and by items 30-36 (linear time / cyclical time).

Procedures

Design. A cross-sectional survey design was utilized to compare the cultural learning preferences of Japanese university students and NESTs. The researcher contacted multiple universities to obtain permission to collect data. Once permission was granted, native English speaking teachers, known to the researcher, were contacted to request their cooperation in the study. Upon receipt of their acknowledgement, the CDLF surveys were mailed to the teachers, along with informed consent forms, demographic information sheets, and instructions for administration. All documents, except for the instructions for administration, were provided in English for the NESTs and translated into Japanese for the students. The teachers were asked to administer the CDLF survey once in required English classes during the fall 2016 semester, which took approximately 15-20 minutes. Teachers were also asked to complete the CDLF surveys and to provide demographic information including country of origin, native language, and length of time teaching Japanese university students in Japan. All information was collected in paper form, and sent by post.

Data analysis. The cultural learning preferences of Japanese university students and NESTs were compared using independent samples t-tests, and the analysis was conducted using SPSS Version 21.0. As shown in Table 2, eight types of cultural learning preferences, grouped into three categories, were measured for both students and NESTs using the CDLF Survey (Parrish & Linder-VanBershot, 2010). To determine if significant differences existed between students’ and NESTs’ cultural learning preferences, eight null hypotheses were tested. The null hypothesis states that there is no significant difference in the teacher and student means ($H_0: \mu_1 = \mu_2$). A table was used to report the means, t-values, df-values, and p-values. By convention (Huck, 2012), statistical significance is set at $p < .05$, so this was the alpha level used in this study. Practical significance was determined for each hypothesis using Cohen’s $d$. Recommended effect sizes (Huck, 2012) were set at $d > .2 = \text{small}; d > .5 = \text{medium}; d > .8 = \text{large}$. 
In determining the data analysis for this study, consideration was given to the use of parametric versus non-parametric statistics. One view, according to Carifio and Perla (2008), is that rank-order data, produced by Likert scales, is *ordinal* in nature, and should be analyzed using non-parametric tests. Others have suggested that *ordinal* data can be treated as *interval* data, which would justify the use of parametric analyses (Sullivan & Artino, 2013). It has also been argued that Likert *scales* produce *interval* data which may be approached using parametric statistics (Carifio and Perla, 2008). Sullivan and Artino (2013) noted that the use of survey *scales* is recommended, especially for attitudinal, non-concrete concepts, as single items are less likely to be a full and accurate reflection of participants’ preferences. The CDLF Survey, used in this study, relied on *scales,* (comprised of 3-7 items) as opposed to individual items, and as mentioned above, Cronbach’s alpha had been used previously (Bokhari & Panhwar, 2014) to ensure internal consistency reliability. For these reasons, it was determined that parametric (as opposed to non-parametric) statistics were the most accurate way to represent the data in this study.

**The Bonferroni technique.** Because the analysis produced eight independent samples *t*-tests, the Bonferroni technique was considered in order to avoid a Type 1 error (rejecting a true null hypothesis). However, Armstrong (2014) has argued that the Bonferroni technique may simultaneously increase the chance of a Type II error (failing to reject a false null hypothesis.) Armstrong (2014) also claimed that the Bonferroni technique is not suitable for determining statistical significance in individual, separate tests, as it assumes a universal null hypothesis, which was not the case in this study. This study compared eight distinct cultural learning preferences of Japanese students and NESTs, and the statistical significance of each individual test was deemed worthy of investigation. Furthermore, Armstrong (2014) advised against the use of the Bonferroni technique in exploratory studies, such as this, which aimed at providing a springboard for further investigation. Therefore, the decision was made not to use the Bonferroni technique in the analysis.

**Results**

This study compared the cultural learning preferences of freshman Japanese university students and native English speaking teachers (NESTs) from Western countries. The first research question was: What are the cultural learning preferences of freshman Japanese university students and NESTs? The results are summarized on Table 2.

<table>
<thead>
<tr>
<th>Cultural Learning Preferences</th>
<th>Students M (SD)</th>
<th>Teachers M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equality / Authority</td>
<td>3.6 (1.67)</td>
<td>2.48 (.97)</td>
</tr>
<tr>
<td>Individualism / Collectivism</td>
<td>4.98 (1.33)</td>
<td>3.44 (.84)</td>
</tr>
</tbody>
</table>

**Table 2** CDLF Survey Responses: Cultural Learning Preferences of Students and NESTs
Findings indicated a lack of strong preferences on the part of both students and NESTs in most cases. No strong preferences were expressed by students for individualism over collectivism ($M = 4.98$, $SD = 1.33$), for stability seeking over uncertainty acceptance ($M = 6.57$, $SD = 1.34$), for logic argumentation over being reasonable ($M = 4.86$, $SD = 1.68$), or for causality over holism ($M = 4.56$, $SD = 1.27$). Students also did not express strong preferences for clock time over event time ($M = 5.97$, $SD = 1.52$) or for linear time over cyclical time ($M = 5.91$, $SD = 1.12$). The findings also did not reveal strong preferences on the part of NESTs for stability seeking over uncertainty acceptance ($M = 7.21$, $SD = .77$), for logic argumentation over being reasonable ($M = 4.82$, $SD = 1.57$), for causality over holism ($M = 5.19$, $SD = 1.24$), for clock time over event time ($M = 6.61$, $SD = 1.16$), or for linear time over cyclical time ($M = 5.29$, $SD = .93$).

However, strong preferences were expressed, by students, for equality over authority ($M = 3.6$, $SD = 1.67$) and for nurture over challenge ($M = 3.97$, $SD = 1.15$). Strong preferences were also expressed, by NESTs, for equality over authority ($M = 2.48$, $SD = .97$) and for nurture over challenge ($M = 2.97$, $SD = 1.09$). The findings also indicated strong preferences by NESTs for individualism over collectivism ($M = 3.44$, $SD = .84$).

The second research question was: How do freshman Japanese university students differ from NESTs in terms of cultural learning preferences? Eight independent samples $t$-tests were conducted to compare the means for students and NESTs. The results are summarized on Table 3.

**Table 3** Summary of Independent Samples $t$-Tests on Cultural Learning Preferences

<table>
<thead>
<tr>
<th>Cultural Learning Preferences</th>
<th>$t$-Test</th>
<th>Cohen’s $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equality / Authority</td>
<td>$t = 3.161$</td>
<td>$d = .8167$</td>
</tr>
<tr>
<td></td>
<td>$df = 141$, $p = .002$</td>
<td></td>
</tr>
<tr>
<td>Cultural Learning Preference</td>
<td>t</td>
<td>df</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>Individualism / Collectivism</td>
<td>5.438</td>
<td>141</td>
</tr>
<tr>
<td>Nurture / Challenge</td>
<td>3.916</td>
<td>141</td>
</tr>
<tr>
<td>Epistemological Beliefs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability Seeking / Uncertainty Acceptance</td>
<td>-2.265</td>
<td>141</td>
</tr>
<tr>
<td>Logic Argumentation / Being Reasonable</td>
<td>.095</td>
<td>141</td>
</tr>
<tr>
<td>Causality and Complex Systems / Analysis and Holism</td>
<td>-2.182</td>
<td>141</td>
</tr>
<tr>
<td>Temporal Perceptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clock Time / Event Time</td>
<td>-1.957</td>
<td>141</td>
</tr>
<tr>
<td>Linear Time / Cyclical Time</td>
<td>2.52</td>
<td>141</td>
</tr>
</tbody>
</table>

Statistically significant differences were discovered between students and NESTs on six cultural learning preferences. On the equality / authority dimension, students ($M = 3.60, SD = 1.67$) differed significantly from NESTs ($M = 2.48, SD = .97$), $t (141) = 3.161, p = .002$. Cohen’s $d$ was calculated using the formula: $d = M_1 - M_2 / \sigma_D$. Cohen’s $d$ effect size indicated a large difference between the two groups ($d = .8167$). Similarly, on the individualism / collectivism dimension, students ($M = 4.98, SD = 1.33$) differed significantly from the NESTs ($M = 3.44, SD = .84$), $t (141) = 5.438, p = .000$, with a large effect size indicated by Cohen’s $d$ ($d = 1.382$). Significant differences were also discovered between students ($M = 3.97, SD = 1.15$) and NESTs ($M = 2.97, SD = 1.09$) on the nurture / challenge dimension, $t (141) = 3.916, p = .000$. Cohen’s $d$ indicated a large difference between the two groups ($d = .8898$) on the nurture / challenge dimension. On the stability seeking / uncertainty acceptance dimension, students ($M = 6.57, SD = 1.34$) differed significantly from the NESTs ($M = 7.21, SD = .77$), $t (141) = -2.265, p = .02$, with Cohen’s $d$ indicating a medium difference between the two groups ($d = .587$). Students ($M = 4.56, SD = 1.27$) differed significantly from the NESTs ($M = 5.19, SD = 1.24$), $t (141) = -2.182, p = .03$ on the causality / holism dimension, and Cohen’s $d$ indicated a small effect size ($d = .4921$). Students ($M = 5.91, SD = 1.12$) differed significantly from the NESTs ($M = 5.29, SD = .93$), $t (141) = 2.528, p = .01$ on the linear time / cyclical time dimension, and Cohen’s $d$ effect size indicated a medium difference between the two groups ($d = .5999$). In all of these cases, the alternative hypothesis was supported and the null hypothesis was rejected ($H_a: \mu 1 \neq \mu 2$).
There were two dimensions where no statistically significant differences were discovered. On the logic argumentation / being reasonable dimension. Students ($M = 4.86, SD = 1.68$) did not differ significantly from the NESTs ($M = 4.82, SD = 1.57$), $t$ (141) = .095, $p = .92$. Furthermore, Cohen’s $d$ indicated a small difference between the two groups ($d = .0217$). Similarly, on the clock time / event time dimension, students ($M = 5.97, SD = 1.52$) did not differ significantly from the NESTs ($M = 6.61, SD = .16$), $t$ (141) = -1.957, $p = .05$, and Cohen’s $d$ indicated a small difference between the two groups ($d = .4745$). Consequently, the alternative hypothesis was supported and the null hypothesis was rejected ($H_a: \mu_1 \neq \mu_2$) on the logic argumentation / being reasonable dimension and on the clock time / event time dimension.

Discussion

This study explored cultural dimensions of learning among freshman Japanese university students and native English speaking teachers (NESTs). As stated previously, a dimension is “an aspect of culture that can be measured relative to other cultures” (Hofstede et al., 2010, p. 31). The following analysis has broad relevance internationally especially for practitioners in multi-cultural ELT environments.

Lack of Strong Preferences: Epistemological Beliefs and Temporal Perceptions

The lack of strong preferences among both groups in the categories of epistemological beliefs and temporal perceptions suggests that the culture distance between Japanese students and NESTs may not be as large as the literature suggests, particularly in the area of dialectic thinking. Ratings of 4-7, according to Parrish and Linder-VanBerschot (2010), should be interpreted as a lack of strong preference for either end of each continuum. However, Hunt and Tickner (2015) have opined that mid-range ratings may suggest equal preferences for both ends of each continuum. If the latter is the correct interpretation, it lends credence to the argument that East Asians have the ability to process information dialectically, which involves perceiving value in seemingly contradictory points of view (Grove, 2015a). The value in this approach is that “thought must not be constricted by rigid, predetermined rules . . . . It is desirable to find a harmonious middle way between extreme conclusions or solutions” (Grove, 2015a, p. 63). In addition, the NESTs did not express strong preferences in the categories of epistemological beliefs or temporal perceptions, despite characterizations of Western thought as “analytic” and prone to making clear distinctions among attributes or categories (Nisbett, 2003), which suggest that NESTs also have the potential to process information dialectically. Another possibility is that students and teachers may have adjusted to each others’ learning / teaching styles. These points will be discussed further below.
**Strong Preferences for Social Relationships**

The fact that both students and NESTs expressed strong preferences for dimensions categorized as social relationships also suggests that the culture distance between Japanese students and NESTs may not be as large as the literature suggests. Both groups expressed preferences for equality over authority and nurture over challenge. Preferences for equality over authority, by both groups, indicate preferences for critical dialog, perceptions of teachers and students as equals (Parrish & Linder-VanBerschot, 2010), and student-centered learning (Hofstede et al., 2010). Furthermore, preferences by both groups for nurture over challenge suggest a preference for harmony, modesty, and collaboration over competition and assertiveness (Parrish & Linder-VanBerschot, 2010). These findings both support and challenge characterizations of Japanese students and NESTs in the literature. Students’ preferences for equality over authority challenge depictions of Japanese students as deferential to superiors and power distant (Hofstede et al., 2010; Lewis, 2006), while their preferences for nurture over challenge supports characterizations of Japanese students as prioritizing harmony, modesty, and relationships over competition and assertiveness (Hofstede et al., 2010; Lewis, 2006; White, 1987). Similarly, NESTs’ preferences for nurture over challenge is in direct contrast to White’s (1987) contention that competition, independence, and personal achievement are prioritized over collaboration in Western educational systems, and to Sulkowski and Deakin’s (2009) depiction of the Western notion of success as individualistic and ego-enhancing. At the same time, NESTs’ preferences for equality over authority suggests a belief in the equality of teachers and students and in student-centered learning, characteristic of low power distant cultures (Hofstede et al., 2010), while their preferences for individualism reflects the belief that students should express their opinions freely, even if they diverge from those of teachers (Parrish & Linder-VanBerschot, 2010).

**Statistically Significant, but Small Differences**

Although statistically significant differences were discovered between students’ and NESTs’ responses on six of the eight cultural dimensions of learning, the numerical differences were small in all cases, which also suggests relatively small culture distance between the groups. This is because statistical significance, without practical significance, does not suggest large differences. Notably, the largest differences were discovered in the dimensions categorized as social relationships, based on Cohen’s $d$ effect sizes. This finding provides evidence to support Varnum et al.’s (2010) contention that social orientation is the main driving force behind cultural differences in cognition, and Grove’s (2015b) argument that the individualism and collectivism dimension is the “grand dimension” that underlies all others (p. 199). As mentioned previously, midrange responses for both groups were also discovered for stability seeking, causality, and linear time, which if accurate, appear to indicate a significant number of shared meanings, or less culture distance as defined by Grove (2015b).

The fact that this study revealed statistically significant, but small differences between Japanese
students and NESTs may also be attributable to the extent to which these two groups had adjusted to each others’ teaching / learning styles. The variety of preferences expressed by the participants in this study may have resulted from exposure to multiple instructional environments, and this offers some support for Tran’s (2013) claim that pedagogical practices may have a greater impact on learning preferences than culture. The students in this study would likely have been exposed to a variety of instructional approaches as a result of having studied with ALTs from overseas in Japanese junior high and high schools, (MEXT, 2011; Tanabe & Mori, 2013). They were also enrolled in university EFL classes taught by international teachers at the time of this study. It is also likely that the NESTs (from “individualist” cultures) who live and work in Japan (a “collectivist” culture), had adjusted their pedagogical approaches to accommodate the learning approaches of Japanese students, thereby providing evidence to support the Asymmetry Hypothesis (Hemmasi & Downes, 2013) mentioned earlier. The findings also seem to support the Culture Distance Paradox (Hemmasi, & Downes, 2013), as students and teachers from presumably distant cultures may have engaged in greater adjustment to each other than if they had come from culturally similar backgrounds. The fact that all of the teachers in this study were longtime residents of Japan, adds to the likelihood that they had adjusted to the learning approaches of Japanese students. These dynamics are worthy of exploration in other cross-cultural ELT environments.

Difficulties in Conceptualizing and Operationalizing Culture Distance

The lack of conclusive findings in this study highlight the inherent difficulty in conceptualizing and operationalizing culture distance. Many attempts have been made to define and measure culture distance (Grove, 2015b; Hall & Hall, 1990; Hofstede et al., 2010; Nisbett, 2003; Varnum et al., 2010). Dimensions approaches, although subject to criticism (Jackson, 2011; McSweeney, 2002), seek to avoid conceptualizing each dimension as a simple dichotomy or binary through the use of gradations to reflect complexity and instead capture central tendencies (Grove, 2015b). However, as stated below, rating scales with multiple options heighten the difficulty in distinguishing between various levels of agreement and disagreement. Furthermore, the fact that the findings of this study both support and contradict depictions of both groups in academic literature raises questions about theoretical frameworks originating in Western, Anglophone contexts for cross-cultural analysis. Hunt and Tickner (2015) have problematized such approaches, and have instead endorsed Goodfellow and Lamy’s (2009) problematized, multifaced approach to exploring culture.

Conclusion and Implications

Given that large numbers of Japanese students study English with native English speaking teachers (MEXT, 2011; Tanabe & Mori, 2013), who may appear to differ considerably from students in terms of cultural dimensions and value orientations (Hofstede et al., 2010), this study explored potential culture distance that may impact this learning dynamic. Using the Cultural Dimensions of Learning
(CDLF) framework, the cultural learning preferences of freshman Japanese university students and Native English speaking Teachers (NESTs) were compared. While no strong preferences were revealed among either group for dimensions categorized as epistemological beliefs or temporal perceptions, strong preferences were revealed in the category of social relationships. Although statistically significant differences were discovered between students and teachers in six out of the eight categories, the actual differences were small. These findings, many of which challenge the depictions of Japanese and Western educational approaches in the academic literature, suggest not only that the culture distance between these two groups may not be as large as the literature suggests, but also point to the ability of both groups to adjust to each others’ teaching / learning styles. This adjustment, in turn, supports Tran’s (2013) argument that pedagogical practices may have a greater impact on learning preferences than culture, as the variety of responses may have resulted from exposure to multiple instructional environments. The inconclusive findings in this study, and ambiguity contained therein, highlight the inherent difficulty in conceptualizing and operationalizing culture distance, and also raise questions about the use of theoretical frameworks constructed in a Western context in cross-cultural analysis.

Practical implications of this study include the need for teachers, who work with students from different cultural backgrounds, to engage in reflective practice so as to avoid pre-conceived notions about the way “culturally distant” students learn. At the same time, it is advisable to maintain awareness of how students’ cultural background may impact their learning, and to design culturally sensitive instruction with this in mind. Culturally sensitive instruction should incorporate exposure to a variety of learning activities and approaches, as well as careful scaffolding, if and when needed. Furthermore, while teachers should not underestimate the ability of students to adapt to the instructional environment, they should also remain cognizant of the extent to which they are also adjusting to the preferred learning approaches of students. Finally, teachers should not overestimate the apparent “culture distance” in cross-cultural learning environments, as this may blind them to the significant number of shared meanings and commonalities they share with students upon which successful educational encounters are built.

Limitations and Further Research

Future investigations of culture distance in increasingly diverse learning environments should consider the following. The CDLF survey (Parrish & Linder-VanBerschot, 2010), used in this study, encapsulated a dimensions approach, so as to avoid conceptualizing each dimension as a simple dichotomy or binary (Grove, 2015b). Therefore, participants were asked to indicate their preferences along 36 continua from 1 to 10. However, Dornyei and Taguchi (2010) have cautioned that unreliable responses may be generated from rating scales with more than five options because of the difficulty in differentiating between various levels of agreement or disagreement. Furthermore, Hunt and Tickner (2015) have opined that the eight cultural learning preferences in the CDLF survey are multi-
dimensional constructs that cannot be accurately captured using a 1-10 point scale. Another limitation of the current study is that it relied upon self-reported information. Creswell (2012) has argued that a discrepancy sometimes exists between what people do and what they believe they do, so findings that emerge from self-reported data should be interpreted with caution. The reliability of self-reported data has also been questioned based on the idea that the desire to preserve “social desirability” or a failure to comprehend questions may result in response bias and may thus compromise the reliability of such data (Rosenman, Tennekoon, & Hill, 2011). Future investigations that incorporate qualitative approaches, such as ethnographic and grounded theory designs, have the potential to shed deeper insight into the complex, multifaced phenomena under investigation.

References
London: Continuum.


