

Investigating the Relationship Between Cultural Dimensions of Learning and English Language Proficiency

Margaret M. Lieb

Mukogawa Women's University

<maggielieb@gmail.com>

Abstract

English proficiency is valued in Japan for its facilitation of participation in the international community. However, average proficiency remains low despite strategic efforts of Japan's Ministry of Education. Based on research indicating that culture may impact learning, this quantitative study investigated the impact of culture on English proficiency among 119 freshman Japanese students at a Japanese university. The Cultural Dimensions of Learning Framework (CDLF) (Parrish & Linder-VanBerscht, 2010), based partly on Hofstede's cultural dimensions theory, was used to measure cultural learning preferences categorized as social relationships, epistemological beliefs, and temporal perceptions. English proficiency was determined through self-reported TOEFL ITP scores, and a correlational, explanatory design was used, which investigates the association between two variables. No strong preferences were found for six out of eight cultural learning preferences, and no statistically significant relationships were discovered between cultural learning preferences and TOEFL ITP scores. The findings may be indicative of diversity in learning approaches and/or limitations in the instruments, while preferences for social relationships may impact social interaction, not measured by TOEFL ITP. As such, the findings solidify the argument for reporting non-significant data, which mandates a critical evaluation of current thinking about the complex and multifaceted relationship between culture and language proficiency.

Introduction

English is widely considered the language of science, business, and diplomacy, and proficiency in English is deemed paramount to international communication. According to the Education First English Proficiency Index (EF EPI, 2017), there is a real "need for a shared language in our deeply connected world" (p. 4). EF EPI (2017) has also recognized that international trade has become the driving force behind most national economies, and the most common language required for this is English. Additionally, EF EPI (2017) has reported positive correlations between proficiency in English and individual earning power, as well as increased access to 52% of the world's most visited websites which are in English. EF EPI (2017) has also noted that English proficiency facilitates instantaneous dissemination of innovative ideas to the widest possible global audiences. Although EF EPI (2017) compiles rankings of countries and regions according to their English

proficiency, it should be noted that because the sampling method used is self-selection, proficiency results for individual countries or regions are not necessarily representative of those regions. However, national governments are devoting considerable resources to English language education in their efforts to ensure global competitiveness.

Asia is no exception, where investment in English education is growing, and English proficiency is viewed as an essential driver of economic growth and international competitiveness (Muslimin, 2017, November 30). In Japan, English proficiency is highly valued for its contribution to Japan's participation in international economic, social, and political discourses (Sakamoto, 2012). Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT) has prioritized English proficiency in the face of globalization and the increasing flow of people, information, and money across borders (MEXT, 2011a). MEXT claims that English language proficiency is essential for individual employment and career advancement, and for Japan's international competitiveness. Furthermore, the outpouring of international support for Japan in the aftermath of the Great East Japan Earthquake of 2011 has led many Japanese to feel a sense of connectedness to the international community (MEXT, 2011a). This underscores the value of English in Japan for international communication and for cross-cultural cooperation. Therefore, MEXT is actively promoting English language education at all levels of schooling (MEXT, 2002, 2011a).

Despite these efforts, however, average levels of English language proficiency remain low in Japan. Data from the Educational Testing Service (ETS) (2016a) has revealed that scores on the Test of English as a Foreign Language (TOEFL iBT) in Japan were among the lowest in Asia. In addition, among 46 countries where over 500 people took the Test of English for International Communication (TOEIC), Japan ranked 38th (ETS, 2016b). A survey conducted by Japan's Ministry of Education in December 2016 among 12,850 schools across Japan, found that only 36.1% of junior high school graduates and 36.4% of high school graduates met the Ministry's English proficiency benchmarks (Aoki, 2017, April 6). These statistics have been described as "dismal" (Aoki, 2017, April 6, para. 1), as the Ministry of Education had hoped that at least 50% of students would meet proficiency benchmarks by the end of fiscal 2017. Aoki (2017, April 6) also reported that although proficiency scores improved among junior high and high school teachers, the percentages of teachers who met the Ministry's benchmarks were 32% and 62% respectively, far below the respective targets of 50% and 75%. There is also considerable concern about the communicative ability of Japanese students, which was reflected in the Ministry of Education's 2003 campaign entitled *Japanese with English Abilities* (Stewart, 2009).

These low levels of English language proficiency are inconsistent with Japan's educational achievement in general. The Organization for Economic Cooperation and Development's (OECD) Programme for International Students' Assessment (PISA) found that 15-year old students in Japan achieved higher scores in reading, mathematics, and science literacy than the average scores for OECD countries (OECD, 2018). Furthermore, the International Association for the Evaluation of Educational Achievement (IEA) found that fourth and eighth grade students in East Asian countries, including Japan, consistently lead the world in mathematics and science (IEA, 2018). However, some research suggests that Japan's low levels of English proficiency may be partly attributable to its rigorous examination-based, grammar-translation approach to language teaching (Sakamoto, 2012). Other research suggests that cultural factors may also affect L2 proficiency (Chamont, 2004; De Vita, 2001; Harumi, 2011; Javid, Al-thubaiti & Uthman, 2013; Rivers, 2011; Seilhamer, 2013; Sulkowski & Deakin, 2009; Yashima, 2002) and that deeply held cultural values impact learning (Hunt & Tickner, 2015; Parrish & Linder-VanBerschoot, 2010). This paper explores the influence of culture on English proficiency in Japan.

Literature Review

Culture and Learning

Researchers are becoming increasingly aware of the impact of deeply rooted cultural values and ways of thinking on learning processes. According to De Vita (2001), culture influences how knowledge is perceived, processed, and organized. Communication style, problem-solving, the creation of “mental categories,” and the formation of links between old and new knowledge are also impacted by culture (De Vita, 2001). Furthermore, Nisbett (2003) has maintained that there are profound differences in cultural worldviews and belief systems, and that these have led to differences in thought processes and systems of cognition. He has also suggested that the broad, contextual views of reality, common in Asian cultures, are rooted in their collectivist, interdependent societal values, while the Western proclivity for categorization and conceptualization of objects in isolation may potentially be attributed to their individualist, independent societal values. Zieghan (2001) has also argued that cultural values such as *action* versus *being* and *change* versus *tradition* influence learning behaviors. Furthermore, Zieghan (2001) has described communication styles as “linear or circular, direct or indirect, attached or detached, procedural or personal” (p. 4), and has argued that these may influence learners’ behavior in classrooms.

The importance of understanding how culture affects learning is receiving considerable attention in academic literature. Parrish and Linder-VanBerschot (2010) claimed that understanding this connection allows for the design of culturally-sensitive and adaptive pedagogical approaches. Hofstede (1986) has argued that the single biggest factor influencing preferred modes of learning are students’ cultural background and socialization processes. Furthermore, Hofstede, Hofstede, and Minkov (2010) have contended that teaching and learning are conditioned by culture, and that learning behaviors that seem similar across cultures may be rooted in different value systems. This contention has led to increased investigation of the impact of culture on learning. One of the most utilized models in comparing national cultures in academic research is Hofstede’s Cultural Dimensions Theory (Arenas-Gaitán, Ramirez-Correa, & Rondan-Cataluña, 2011; Tapanes, Smith, & White, 2009).

Hofstede’s Cultural Dimensions Theory

Hofstede et al. (2010) collected survey data on the values of IBM employees in 40 countries in the 1970s, based on the idea that the samples in each country differed little except for nationality. The data initially revealed four *dimensions*, each of which Hofstede defined as “an aspect of a culture that can be measured relative to other cultures” (2010, p. 31). Since Hofstede’s original research, many replications have taken place, which have not only confirmed the original four dimensions, but have yielded two more. Dimensions scores are currently available for 107 countries or regions. Hofstede’s original four dimensions are power distance (PDI), individualism-collectivism (IDV), masculinity-femininity (MAS), and uncertainty avoidance (UAI). The two most recently added dimensions are long-term orientation (LTO) and indulgence-restraint (IVR) (Hofstede et al., 2010).

Hofstede et al. (2010) identified and defined six cultural dimensions. First is power distance (PDI), which involves willingness to accept unequal distribution of power and status. Second, they defined individualism (IDV) as the extent to which a culture values self-reliance and independence versus group membership. The third dimension, masculinity, (MAS) refers to cultural tendencies to make clear distinctions in gender roles. The fourth dimension, uncertainty avoidance (UAI), describes the way in which members of a culture react to ambiguous or unpredictable situations. Fifth is long-term orientation (LTO), which characterizes a cultural tendency to prioritize future-oriented virtues such as perseverance and thrift over short-term virtues such as meeting social obligations, respecting tradition, and saving face. Finally, indulgence (IVR) is related to a culture’s preference

for immediate gratification and enjoyment of life versus the regulation and curtailment of such gratification by strict, social norms. Cultures with high IVR scores tend towards the former, while cultures with low IVR scores tend towards the latter. The most frequently studied dimension in cross-cultural learning situations is the individualism-collectivism (IDV) dimension (Tapanes, et al., 2009). Hofstede et al., (2010) have characterized Japan as a culture with very high UAI, MAS, and LTO scores and moderately high PDI, IDV and IVR scores.

Cultural Dimensions and Learning. Several empirical studies have explored the relationship between Hofstede's cultural dimensions and learning. Jung, Kudo, and Choi (2012), for example, in a study of Japanese university students in an online, collaborative, English-medium learning environment, discovered anxiety about English proficiency and the learning environment which they attributed partly to cultural mismatches between students' learning preferences and the learning environment. They also opined that, in Japan, most learners tend to be more comfortable with teacher-centered learning environments than with online collaborative learning. In addition, they acknowledged the Japanese preference for high-context communication wherein non-verbal cues are central to communication, as opposed to low-context communication which relies much less on non-verbal cues. In an English medium online environment, non-verbal cues are absent. Furthermore, the authors linked students' stress about lack of clear, specific guidelines to their high Uncertainty Avoidance ratings (UAI). They concluded that students' language proficiency and cultural background should be given due consideration when designing online programs (Jung et al., 2012).

Other studies have indicated that cultural dimensions may influence students' classroom learning style preferences. Boland, Sugahara, Opdecam, and Everaert (2011) investigated the influence of culture on accounting students' learning style preferences in universities in Japan, Belgium, and Australia. They found that learning style preferences were influenced by culture, and that Japanese collectivism, high UAI and moderately high PDI ratings may contribute to classroom reticence, while the Belgian and Australian students' low PDI and UAI ratings seemed to correlate with preferences for experiential, autonomous learning. They cautioned, however, that differences in learning style preferences cannot be explained solely by culture. Another caveat is that their study was based on Kolb's experiential learning theory, which has come under criticism for its positioning of discovery as central to learning (Dennison, 2012), as has the reliance on learning styles to inform pedagogy because of a lack of validity and research-based evidence (Li, Medwell, Wray, Wang, & Liu, 2016).

Sulkowski and Deakin (2009) designed a questionnaire based on Hofstede's cultural dimensions and used it to investigate the relationship between culture and learning among international students at UK universities. They found that students from collectivist cultures prioritized their standing with peers over individual achievement. Sulkowski and Deakin (2009) explained this by contrasting the individualistic, ego-enhancing achievement orientation of Western educational psychology with the East Asian notion of success as shared by family, peers, and the wider society. Similarly, Watkins and Biggs (1996) posited that Western students often view education as a means to an end, or a way to achieve a good job or a high salary while East Asian students are often motivated by family, face, and peer support. Sulkowski and Deakin (2009) also found that students from high power distant cultures were reluctant to question teachers, and in some cases even feared them. This research also suggested a preference by East Asian students for didactic teaching approaches and a reluctance to express opinions openly. This contrast in learning preferences was also noted by Chu and Nakamura (2010) who characterized Western students as self-directed, independent thinkers, undaunted by authority and East Asian students as the opposite.

Culture and English language learning. Other research has focused specifically on the impact of culture on English language learning. Ashouri and Fotovatnia (2010), for example, investigated Iranian students' beliefs about translation in English language learning and how these beliefs are influenced by the cultural values of ambiguity tolerance and risk-taking. They found that most learners viewed translation positively as a learning strategy and attributed this to Hofstede et al.'s (2010) categorization of Iranians in general to be uncomfortable with risk taking. Mirdehghan, HoseiniKargar, Navab, and Mahmoodi (2011) also investigated cultural influences on English Language Teaching (ELT) in Iran, and claimed that because each culture has a unique impact on language learning, it needs to be studied individually. In a study of 101 Japanese university EFL students, Sim and Roger (2016) discovered relatively high levels of foreign language anxiety, self-doubt, and insecurity, combined with fear of negative evaluation that may adversely impact their language learning. They also noted that students' concern about how they were perceived by others was particularly detrimental to their language development. Hofstede et al. (2010) have assigned Japan an IDV score of 46, suggesting a tendency towards collectivism in Japanese culture. In collectivist cultures, according to Hofstede et al. (2010) students are often reluctant to speak up without approval from their group, and are often restrained by the sense of shame and saving face.

Challenging Cultural Depictions of Learners

Not all research concurs with the aforementioned depictions of Asian learners. Hofstede et al. (2010), for example, have found a significant positive correlation between LTO and performance in mathematics, and they have ranked Japan third out of 93 countries and regions in terms of LTO. They have also claimed that the superior performance in mathematics and science of East Asian students refutes the assumption that they rely on rote memorization, and that the Western characterization of 'rote learning' may simply be a different route to understanding. Watkins and Biggs (1996) described this assumption as the "Chinese paradox," which suggests that students who engage in Confucian approaches to education, including memorization and repetition, can, in fact, achieve deep learning.

Tran (2013) has also challenged characterizations of students from Confucian heritage cultures (CHC) such as China, Vietnam, Singapore, Korea, and Japan, as passive, compliant learners, reliant on rote memorization. These depictions are in stark contrast to characterizations in the literature of Western students as active, independent, questioning learners. He conducted interviews with university students from China, Vietnam, Singapore, Thailand, and Korea studying in Australia, most of whom disagreed that CHC students were passive or that their learning approaches were influenced by culture. While face-saving was important to them, they disputed the idea of the teacher as the provider of information. In terms of memorization versus understanding, students explained that they must understand before they can memorize. While many of the students agreed that they tend to be quiet in class, they attributed this partly to their lack of English proficiency and partly to a reluctance to disrupt the flow of the class. Tran (2013) concluded that the depiction of Asian students as passive is an over-generalization, and that students' learning preferences are influenced more by pedagogical practices and course requirements than by culture.

Finally, O'Dwyer (2017) has challenged the notion of culturally distinct learning behaviors of Confucian Heritage Culture students, and has argued that such approaches are reductivist and fail to account for rapid social change and the inherent diversity in Asian societies. That said, according to EF EPI (2017) high English proficiency depends less on memorization and accuracy than high achievement in mathematics and science, and suggests that to raise English proficiency rates, there needs to be a shift away from grammar-focused instruction and a greater focus on practical communication skills especially in Hong Kong, Singapore, and Japan.

Challenging Essentialist Frameworks and Dimensions Approaches

While some research has supported the use of frameworks such as Hofstede's cultural dimensions theory for their use in designing culturally appropriate learning environments (Gunawardena et al., 2001), other research challenges the use of such frameworks. Goodfellow and Lamy (2009), for example, have opined that the use of "essentialist" frameworks is predicated on the assumption that individuals' thoughts, values, and behaviors are products of their cultural, geographic, historical, and linguistic backgrounds, which leads to mental "hardwiring" that is shared by members of cultural groups. In addition, Fougère and Mouettes (2007) have problematized frameworks constructed from an Anglo / North American / Australasian, English speaking paradigm, which tend to portray so-called "individualistic" societies as "more educated, more literate, more wealthy, . . . more equal, more questioning" (2007, p. 11), and, as such, may be considered ethnocentric. Similarly, Jackson (2011) has highlighted the limitations of Hofstede's theory, as a basis for action, in multi-layered, multi-influenced contexts, and has cautioned against simplistic comparisons between "cultures" (p. 532) that fail to account for context and power-dynamics, and instead rely on a small number of universally applied value dimensions. McSweeney (2002) has also challenged the notion of national uniformity, inherent in Hofstede's theory, as it fails to account for the impact of non-national and non-cultural forces in shaping societies. Even Hofstede (2011) has acknowledged that the use of the dimensional paradigm as a unit of analysis "represent[s] subjective, reflective attempts to order a complex reality" (p. 5).

It is also worth noting that Richard Nisbett's characterization of "Asian" and "Western" thought processes has come under scrutiny. Ortner (2003, April 20), for example, raised methodological concerns, including the sampling approach, as most of Nisbett's subjects were college students, which undermines the generalizability of his claims beyond this subgroup. She also problematized Nisbett's reliance on decontextualized experimental tasks to reach his conclusions, rather than "participant observation," which Ortner has argued is rooted in people's social and cultural contexts and is thus more likely to yield valid insights. Finally, she disputed the notion of the "Asian" / "Western" dichotomy, and highlighted the possibility that the differences *within* these "absurdly large categories" (para. 7) may be as numerous and as significant as the differences between them.

The Cultural Dimensions of Learning Framework.

To investigate how culture impacts teaching and learning, Parrish and Linder-VanBershot (2010) designed 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 rationale for developing this framework was the increasing number of cross-cultural learning environments and the accompanying need to provide culturally sensitive and culturally adaptive instructional environments (Parrish & Linder-VanBershot, 2010). Based on the CDLF, Parrish and Linder VanBershot (2010) developed the *Survey of Culturally Based Learning Preferences*, also known as the CDLF survey, which measures eight cultural dimensions that provide the value basis for manifested learning behaviors among individuals. Parrish and Linder-VanBershot (2010) have cautioned that challenging these behaviors may conflict with students' underlying values. The eight cultural dimensions are divided into social relationships, epistemological beliefs, and temporal perceptions.

Dimensions categorized as social relationships include *equality / authority*, *individualism / collectivism*, and *nurture / challenge* (Parrish & Linder-VanBershot, 2010). A preference for equality over authority includes the perception of teachers as equals, and an interest in critical dialog and discussion. A preference for individualism over collectivism entails a greater likelihood of speaking up and expressing opinions freely. Learning behaviors associated with nurture include

collaboration and modesty, while behaviors associated with challenge include competition, assertiveness, and the desire for excellence. Dimensions categorized as epistemological beliefs include *stability seeking / uncertainty acceptance*, *logic argumentation / being reasonable*, and *causality / holism* (“A Framework,” para. 6). Learning behaviors associated with stability include structured learning, avoidance of ambiguity, and emphasis on “right” answers, while behaviors associated with uncertainty acceptance include open-ended learning, acceptance of ambiguity, and emphasis on process. Learning behaviors associated with logic include focus on logical reasoning and argumentation, while the reasonable dimension is associated with multiple truths and consensus building. The causality dimension is associated with goals and cause-effect explanations, while the holistic dimension is associated with evolving and situational knowledge. Dimensions categorized as temporal perceptions include *clock time / event time* and *linear time / cyclical time* (“A Framework,” para. 6). The clock focus dimension is associated with fixed start and end times for instructional activities, strict deadlines and procedures, while the event focus is associated with flexible timing, changeable deadlines, and less emphasis on procedures. Learning behaviors associated with linear time include careful time management, linear, sequential learning goals, and focus on the future. However, cyclical time is associated with adaptation to time and non-linear learning that includes repetition and consciousness of the value of past learning.

Bokhari and Panhwar (2014) used the CDLF survey to investigate the relationship between multicultural learning styles and cultural dimensions, and the impact of cultural dimensions on academic performance among Pakistani MBA students in an online program. They discovered a positive relationship between multicultural learning styles and both epistemological beliefs and temporal perceptions, but a negative relationship with social relationships. All three categories of cultural learning preferences were found to have an equivalent impact on academic performance. However, they acknowledged that there is limited research to support the notion of culturally different learning styles, and this is in keeping with current challenges to the concept of learning styles based on lack of validity and research-based evidence (Li et al., 2016).

In a study of 225 Croatian undergraduate students, Sobodić, Balaban, and Tomašević (2017) used the CDLF survey to examine the relationship between cultural dimensions of learning and students’ perceptions of an e-learning system. Their findings did not reveal significant relationships, but did discover gender differences in social relationships and temporal perceptions, as well as differences in social relationships among students in different fields of study. Hunt and Tickner (2015) used the CDLF survey to investigate cultural dimensions of learning in online teacher education courses offered by a university in New Zealand. Their findings failed to reveal any learning differences that could have been related to culture, and they partly attributed this to the lack of diversity in the sample, which was mostly female and self-identified as of European ethnicity. However, they did acknowledge that the CDLF is useful for promoting reflection and awareness of a variety of cultural learning preferences among teachers and students.

Methodology

The purpose of this study was to investigate the connection between the cultural learning preferences of freshman Japanese university students and English language proficiency. Two research questions were investigated:

- RQ1: What are the cultural learning preferences of freshman Japanese university students?
- RQ2: How do these learning preferences affect their English proficiency?

Participants

The nonprobability approaches of convenience and snowball sampling were used to recruit 119 students from the same department in a Japanese university, who had completed six years of mandatory English education in junior high and high schools, and were taking required university English classes. None of the students had studied abroad for more than one month. English language teachers at the university were contacted and asked to identify students who were available and willing to participate. The sample was limited to freshman Japanese students, whose first language was Japanese. Both male and female students, aged 18-19 were included. Although data were collected from 134 students, seven students failed to complete the survey, five students had studied abroad for more than one month, and three students indicated that they were not Japanese. Therefore, data from the remaining 119 students were included in the study ($N = 119$).

Instruments

Survey on Culturally Based Learning Preferences (CDLF survey). The CDLF survey, developed by Parrish & Linder-VanBerschoot (2010) was the primary instrument used in this study. The use of a questionnaire was deemed appropriate for this study because it facilitates the collection of a large body of data in a short time period, and enables researchers to observe patterns of responses among groups rather than individuals (Sim & Roger, 2016). The CDLF survey, as stated previously, measures learning behaviors associated with cultural values. The CDLF differs from Hofstede et al.'s (2010) dimensions as it seeks to identify culturally-based learning preferences and it is predicated on the notion that these preferences exist along eight continua (Linder-VanBerschoot & Barbera, 2012). Furthermore, Hofstede et al.'s (2010) cultural dimensions theory focused on national cultural differences as opposed to variations among individuals. Bokhari and Panhwar (2014) used Cronbach's alpha to evaluate the internal consistency of this instrument, which resulted in a value of .74. Ranges between .70 and .95 are considered appropriate (DeVellis, 2011).

This 36-item instrument measures eight cultural learning preferences categorized as social relationships, epistemological beliefs, and temporal perceptions, by asking participants to indicate their level of agreement or disagreement with opposing statements along continua from 1 to 10. The average scores for each of the eight categories were then calculated. Answers that averaged 1-3 were interpreted as a preference for the statement on the left; averages of 8-10 were associated with a preference for the statement on the right. Answers that averaged 4-7 were interpreted as a lack of a strong preference for either statement. The preferences characterized as social relationships include equality / authority (items 1-3), individualism / collectivism (items 4-7), and nurture / challenge (items 8-12). The preferences characterized as epistemological beliefs include stability seeking / uncertainty acceptance (items 13-18), logic argumentation / being reasonable (items 19-21) and causality / holism (items 22-25). The preferences characterized as temporal perceptions include clock time / event time (items 26-29) and linear time / cyclical time (items 30-36). A Japanese version of the CDLF survey was used.

TOEFL ITP (ETS, 2016). More than 9,000 academic institutions in over 130 countries accept TOEFL scores as measures of English language proficiency, and over 30 million people worldwide have taken TOEFL to determine their English language proficiency (ETS, 2016a). Participants in this study were asked to self-report their existing TOEFL ITP scores as evidence of their English language proficiency. The TOEFL ITP tests listening comprehension, structure / written expression, and reading comprehension (ETS, 2017b). ETS (2017a) has claimed that TOEFL has been supported by multiple pilot tests and over 240 peer-reviewed research reports.

That said, some have argued that TOEFL scores are not necessarily indicative of competence in everyday English, despite their extensive use to screen admissions into English-medium academic

programs (Cho & Bridgeman, 2012; Papageorgiou & Cho, 2014). Unlike TOEFL iBT and the International English Language Testing System (IELTS), TOEFL ITP scores are generally used in-house by institutions for placement, monitoring, and exit assessments, and assess receptive rather than productive English language skills (Golubovich, Tolentino, & Papageorgiou, 2018). As such, TOEFL ITP entails narrower construct coverage than either TOEFL iBT or IELTS.

It should also be noted that the data for this study were self-reported, for both TOEFL scores and the CDLF survey, with the inherent potential for bias. Creswell (2012), for example, has advised caution in the interpretation of self-reported findings, as a discrepancy sometimes exists between what people believe they do and what they actually do. Similarly, Rosenman, Tennekoon, and Hill (2011) have advised caution in relying on self-reported findings because of the potential for response bias in reporting self-assessed behavior or preferences. Such bias, they have argued, may be attributed to a failure to understand questions or even the desire to preserve “social-desirability,” despite assurances of anonymity.

Procedures

Design. This quantitative study employed a correlational, explanatory design, which examines the tendency of two continuous variables to co-vary. This happens when changes in one variable are associated with changes in the other (Creswell, 2012), in this case, cultural learning preferences and English language proficiency. The data were collected at one point in time. The researcher contacted the university in advance to obtain permission to collect data. The purpose of the study was explained and anonymity of participants was guaranteed. Once permission was granted, teachers were contacted to request their assistance. The CDLF survey was mailed to the teachers along with informed consent forms in Japanese for student participants. Each teacher was asked to administer the CDLF survey to freshman students taking required English classes. It took approximately 15 minutes for students to complete the survey. Students were also asked to self-report their TOEFL scores and demographic information. The researcher followed up by contacting non-responders.

Data analysis. The study investigated the relationship between quantitative continuous variables: cultural learning preferences, as measured by the CDLF survey (Parrish & Linder-VanBerschoot, 2010), and English language proficiency, as measured by TOEFL ITP (ETS, 2012). Pearson’s Product-Moment Correlations were used, which yielded eight correlation coefficients, symbolized as r , ranging in value between -1.00 and +1.00 (Huck, 2012). Pearson’s r describes the direction of a trend (positive or negative) as well as the strength of a trend (weak, moderate, or strong). In addition, each analysis produced a probability value (p) that described the likelihood of the trend occurring due to random chance. By convention, probability values less than 5% are deemed statistically significant because the likelihood of the results being due to random chance is rather small.

The Bonferroni technique. Use of the Bonferroni technique was considered to minimize the risk of a Type I error, or rejecting a true null hypothesis. This is because eight correlation coefficients were produced and several null hypotheses were tested. In such cases, Huck (2012) has advised the use of a more rigorous alpha level than the conventional $p < .05$, to avoid an inflated Type I error risk. However, Armstrong (2014) has argued that use of the Bonferroni technique without due consideration may be considered “deleterious to sound statistical judgment” (p. 502). He claimed that although the Bonferroni technique may lower the risk of a Type I error, it may in turn raise the risk of a Type II error, defined by Huck (2012) as failure to reject a false null hypothesis. The decision, according to Armstrong (2014), to use the Bonferroni technique thus depends on the components of the study, and legitimate research studies should include a rationale for its use or

non-use. Armstrong (2014) also noted that the Bonferroni technique tests a universal null hypothesis, and as such, is not useful for determining statistical significance in individual, separate tests. He cautioned against using the Bonferroni technique in studies that are exploratory in nature and seek to provide a springboard for further research.

The decision was made not to use the Bonferroni technique because the purpose of this research was exploratory and it attempted to identify which (if any) cultural learning preferences are associated with English proficiency. Therefore, the conventional alpha level of $p = .05$ was used for each test so as not to miss a notable result. Furthermore, no universal null hypothesis testing was conducted, so the statistical significance of individual, separate tests was deemed worthy of consideration. Finally, a secondary goal of this research was to provide a springboard for further investigation, so the study was designed to avoid a potential Type II error.

Results

The first research question was: What are the cultural learning preferences of freshman Japanese university students? The average responses for each category of learning preferences, shown on Table 1, indicated a lack of strong preferences in most cases. Students did not express strong preferences for individualism over collectivism ($M = 4.98, SD = 1.33$) or for stability-seeking over uncertainty acceptance ($M = 6.57, SD = 1.34$). They also failed to express strong preferences for logic argumentation over being reasonable ($M = 4.86, SD = 1.68$) and for causality over holism ($M = 4.56, SD = 1.27$). Similarly, no strong preferences were evident for the two dimensions categorized as temporal perceptions. Students did not seem to strongly prefer clock time over event time ($M = 5.97, SD = 1.52$), or linear time over event time ($M = 5.91, SD = 1.12$). However, strong preferences were evident in two out of the three dimensions categorized as social relationships: equality over authority ($M = 3.6, SD = 1.67$) and nurture over challenge ($M = 3.97, SD = 1.15$).

Table 1. Survey Responses: Categories of Cultural Learning Preferences.

Cultural Learning Preferences	Students <i>M (SD)</i>
Social Relationships	
Equality / Authority	3.6 (1.67)
Individualism / Collectivism	4.98 (1.33)
Nurture / Challenge	3.97 (1.15)
Epistemological Beliefs	
Stability seeking / Uncertainty Acceptance	6.57 (1.34)
Logic Argumentation / Being Reasonable	4.86 (1.68)
Causality / Holism	4.56 (1.27)
Temporal Perceptions	
Clock Time / Event Time	5.97 (1.52)
Linear Time / Cyclical Time	5.91 (1.12)

The second research question was: How do students' cultural learning preferences affect English proficiency? English language proficiency was determined from self-reported TOEFL ITP scores

and the mean TOEFL ITP score was 463 ($SD = 46.15$). Eight Pearson product-moment correlations were generated. To determine if a significant correlation existed between each cultural learning preference and English language proficiency, the null hypothesis was used in each case (H_0 : The null hypothesis states that there is no relationship between each cultural learning preference and English language proficiency. The results for the second research question are shown on Table 2.

Social Relationships and TOEFL Scores.

As stated previously, the cultural learning preferences characterized as social relationships include equality / authority, individualism / collectivism, and nurture / challenge. These preferences were measured and compared with students' self-reported TOEFL scores.

Table 2. Correlations between Cultural Learning Preferences and TOEFL Scores.

Cultural learning preferences	Pearson's r
Social Relationships	
Equality / Authority	$r = -.09$ $p = .35$
Individualism / Collectivism	$r = -.03$ $p = .70$
Nurture / Challenge	$r = -.14$ $p = .13$
Epistemological Beliefs	
Stability Seeking / Uncertainty Acceptance	$r = -.04$ $p = .68$
Logic Argumentation / Being Reasonable	$r = -.04$ $p = .64$
Causality and Complex Systems / Analysis and Holism	$r = -.04$ $p = .63$
Temporal Perceptions	
Clock Time / Event Time	$r = -.05$ $p = .56$
Linear Time / Cyclical Time	$r = -.05$ $p = .59$

Equality / authority. Participants' scores on equality / authority ($M = 3.60$, $SD = 1.67$) were compared with their self-reported TOEFL scores ($M = 463$, $SD = 46.1$). The Pearson product-moment correlation between equality / authority and TOEFL scores was slightly negative and represented a weak effect size, $r = -.09$, $p = .35$.

Individualism / collectivism. Participants' scores on individualism / collectivism ($M = 4.98$, $SD = 1.33$) were compared with their self-reported TOEFL scores ($M = 463$, $SD = 46.1$). The Pearson product-moment correlation was slightly negative and represented a weak effect size, $r = -.03$, $p = .70$.

Nurture / challenge. Participants' scores on nurture / challenge ($M = 3.97$, $SD = 1.15$) were compared with their self-reported TOEFL scores ($M = 463$, $SD = 46.1$). The Pearson product-moment correlation was slightly negative and represented a weak effect size, $r = -.14$, $p = .13$.

For all three social relationships dimensions, $p > .05$. This was not statistically significant, so the null hypothesis was supported (H_0 : These results revealed no relationship between learning preferences categorized as social relationships and English proficiency, as measured by TOEFL ITP).

Epistemological Beliefs and TOEFL scores

As stated previously, cultural learning preferences characterized as epistemological beliefs include stability seeking / uncertainty acceptance, logic argumentation / being reasonable, and causality / holism. These preferences were measured and compared with students' self-reported TOEFL scores.

Stability seeking / uncertainty acceptance. Participants' scores on stability seeking / uncertainty acceptance ($M = 6.57, SD = 1.34$) were compared with their self-reported TOEFL scores ($M = 463, SD = 46.1$). The Pearson product-moment correlation was slightly positive and represented a weak effect size, $r = .04, p = .68$.

Logic argumentation / being reasonable. Participants' scores on logic argumentation / being reasonable ($M = 4.56, SD = 1.27$) were compared with their self-reported TOEFL scores ($M = 463, SD = 46.1$). The Pearson product-moment correlation was slightly positive and represented a weak effect size, $r = .04, p = .63$.

Causality / holism. Participants' scores on causality / holism ($M = 4.86, SD = 1.68$) were compared with their self-reported TOEFL scores ($M = 463, SD = 46.1$). The Pearson product-moment correlation was slightly negative and represented a weak effect size, $r = -.04, p = .64$.

For all three epistemological beliefs dimensions, $p > .05$. This was not statistically significant, so the null hypothesis was supported (H_0 : These results found no relationship between learning preferences categorized as epistemological beliefs and English proficiency, as measured by TOEFL ITP).

Temporal Perceptions and TOEFL Scores

As mentioned above, cultural learning preferences characterized as temporal perceptions include clock time / event time and linear time / cyclical time. These preferences were measured and compared with students' self-reported TOEFL scores.

Clock time / event time. Participants' scores on clock time and event time ($M = 5.97, SD = 1.52$) were compared with their self-reported TOEFL scores ($M = 463, SD = 46.1$). The Pearson product-moment correlation was slightly negative and represented a weak effect size, $r = -.05, p = .56$.

Linear time / cyclical time. Participants' scores on linear time / cyclical time ($M = 5.91, SD = 1.12$) were compared with their self-reported TOEFL scores ($M = 463, SD = 46.1$). The Pearson product-moment correlation was slightly negative and represented a weak effect size, $r = -.05, p = .59$.

For both dimensions categorized as temporal perceptions, $p > .05$. This was not statistically significant, so the null hypothesis was supported (H_0 : These results suggest that there is no relationship between learning preferences categorized as temporal perceptions and English proficiency, as measured by TOEFL ITP).

Discussion

This study explored the relationship between cultural learning preferences and English language proficiency among freshman Japanese university students. Strong preferences were expressed for only two out of eight cultural learning preferences. No statistically significant relationships were

discovered between cultural learning preferences and English proficiency, although it should be noted that the participants in this study were recruited from one faculty at one Japanese university.

Lack of Strong Preferences for Most Categories

The fact that the findings of this study failed to reveal strong preferences for most categories of cultural learning preferences may be indicative of diverse learning approaches in the sample. This diversity may derive from a variety of experiences, regions of origin, or educational backgrounds. All of the participants had completed six years of mandatory English education in Japanese junior high and high schools, which have been encouraged to more effectively utilize Assistant Language Teachers (ALTs) recruited from overseas (MEXT, 2011a). Furthermore, the study participants were enrolled in mandatory university English classes taught by international teachers. It is likely, therefore, that the participants had experienced a variety of instructional approaches, which supports Tran's (2013) claim that learning preferences are influenced more by pedagogical practices than by culture. Classroom acculturation issues may also have been at play, as the CDLF survey was administered in classes taught by international teachers, and according to Parrish and Linder-VanBershot (2010), instructional approaches are also impacted by culture. Brown (2014) has likened the experiences of some students in foreign language classrooms to "culture shock" (p. 187), but the extent to which the students and teachers in this study had acculturated to the instructional environment over time, and had expanded their repertoire of learning and instructional approaches, was beyond the scope of this study.

The fact that no strong preferences were revealed in the data may also be attributed to limitations within the CDLF survey, particularly given the inherent complexity of the phenomena under investigation. The CDLF survey data is self-reported, which, as stated previously, may contain response bias due to the desire to preserve "social-desirability" or a failure to understand the questions (Rosenman, et al., 2011). In addition, Dornyei and Taguchi (2010) have cautioned that rating scales with more than five options may yield unreliable responses because of the difficulty in distinguishing various levels of agreement or disagreement. Furthermore, while Parrish and Linder-VanBershot (2010) have advised that ratings of 4-7 should be interpreted as a lack of strong preferences for either end of each continuum, Hunt and Tickner (2015) have posited that a score of five, the midpoint for each of the cultural dimensions, may also suggest equal preferences for both ends of the continuum. Hunt and Tickner (2015) have also opined that the 1-10 scale may not be an accurate measure of multi-dimensional constructs, such as cultural learning preferences. Based on this reasoning, Hunt and Tickner (2015) have suggested that the 10-point linear scale may be open to multiple interpretations in different cultural contexts. They have thus argued in favor of Goodfellow and Lamy's (2009) problematized, multifaceted approach to exploring culture as opposed to over-reliance on theoretical approaches constructed from a Western, Anglophone viewpoint. This is discussed further below.

Preferences for Social Relationships

It is notable that the participants in this study expressed strong preferences for only two cultural learning preferences, equality and nurture, both of which have been categorized by Parrish and Linder-VanBershot (2010) as social relationships. Strong preferences for social relationships may be related to the social constructivist perception of language proficiency, and as such, may impact the ability to successfully negotiate interaction with other individuals (Brown, 2014). Furthermore, students who prefer equality over authority tend to perceive teachers as equals and are generally motivated by critical dialog and discussion (Parrish & Linder-VanBershot, 2010). However, this characterization is not compatible with depictions in the literature of Japanese students as high power distant and deferential to superiors (Hofstede et al., 2010; Lewis, 2006), and seems to support

Tran's (2013) findings that students from Confucian Heritage Cultures do not necessarily perceive teachers as providers of information. On the other hand, a preference for nurture over challenge, according to Parrish and Linder-VanBershot (2010), suggests that cooperation and security are prized over recognition and advancement, and that collaboration, modesty, and good relationships are valued over competition, challenge, and assertiveness. These findings seem to support the contention, widely reported in the academic literature, that harmony, modesty, and human relationships are highly valued in Japan (Hofstede et al., 2010; Lewis, 2006; White, 1987).

Lack of Statistically Significant Findings

The findings of this study did not reveal statistically significant relationships between cultural learning preferences and English language proficiency as measured by TOEFL ITP. This may be due to the fact that no strong preferences were expressed by the participants, for six out of the eight categories of cultural learning preferences. Although strong preferences were expressed for two cultural learning preferences categorized as social relationships, it is possible that these preferences are more likely to influence social interaction than TOEFL ITP scores, which are based on structure, listening, and reading comprehension. Language proficiency, according to Hargett (1998), involves at least two people using a common system to communicate thoughts, ideas, and information. Professor of Applied Linguistics, Sandra Savignon, has also contended that communication is a cooperative, interpersonal endeavor as opposed to an *intrapersonal* one (Brown, 2014). Therefore, cultural learning preferences categorized as social relationships may potentially impact interpersonal interaction, which is not measured by the TOEFL ITP. This will be discussed further below.

Reporting Non-significant or Negative Findings

There is also a strong case to be made for the reporting of non-significant or even negative findings. Despite this, Fanelli (2012) has reported that the rate of publication of non-significant findings is declining. Jost and Hunyady (2003) have attributed this decline to pressure on researchers and scientists to acquire grants, publish extensively, and increase citation rates, all of which are believed to be associated with positive findings. Furthermore, Jost and Hunyady (2003) have cited the human desire to confirm pre-existing beliefs as an incentive to publish positive findings only. Nevertheless, Matosin, Frank, Engel, Lum, and Newell (2014) have contended that negative findings are a valuable contribution to academic literature as they force researchers to "critically evaluate and validate our current thinking" (p. 171). The following sections explore the implications of such evaluation for this study.

Critically evaluating current thinking. The literature that guided this investigation is predicated on the assumption that culture impacts learning (De Vita, 2001; Hofstede et al., 2010; Nisbett, 2003; Parrish & Linder-VanBershot, 2010; Zieghan, 2010). It is worth revisiting this assumption by re-examining the two variables that were compared: culture and English language proficiency. Different approaches to conceptualizing and operationalizing these two constructs could potentially have yielded different results in this investigation.

English proficiency was measured by the TOEFL ITP, which, as stated previously, measures predominantly receptive skills. Some research has suggested that although the TOEFL is widely used as an instrument for admission into English-medium academic programs, this does not necessarily imply competence in everyday English (Cho & Bridgeman, 2012; Papageorgiou & Cho, 2014). As mentioned above, TOEFL ITP is primarily used in-house for institutions for placement, monitoring, and assessment purposes, and entails narrower construct coverage than either TOEFL iBT or IELTS (Golubovich et al., 2018). Hargett (1998) has advised that it is necessary to identify what aspects of proficiency are being assessed, such as oral or written competence or the ability to

use clear pronunciation. It is thus highly likely that this study's findings could have been different, had different aspects of proficiency been measured such as communicative competence. As stated previously, concerns about English proficiency in Japan is based not only on relatively low TOEFL and TOEIC scores (ETS, 2016a; 2016b), and Society for Testing English Proficiency (STEP) scores (MEXT, 2011a), but also on the desire to improve the communication and conversational ability of Japanese students (Stewart, 2009). Participants in this study expressed strong preferences for equality and nurture, both categorized as social relationships, and these preferences may potentially impact interpersonal interactions and overall communicative competence.

Another way to critically evaluate current thinking is to examine other aspects of culture and their potential impact on English proficiency. This may include national identity issues, particularly in Japan, where Rivers (2011) has argued that the Japanese desire to preserve national identity and maintain a sense of separateness from foreigners is a key reason why Japan's level of English proficiency consistently lags behind other Asian countries. Similarly, Seilhamer (2013) has opined that the discourses of *nihonjinron* (the belief in Japanese uniqueness) and *kokusaika* (a nationalist approach to internationalization) are significant obstacles to Japan's entry into the international community of English language users. Another conceptualization of culture is "international posture," defined by Yashima (2002) as "interest in foreign or international affairs, willingness to go overseas to stay or work, readiness to interact with intercultural partners, and . . . openness or a non-ethnocentric attitude towards different cultures" (p. 57). Yashima (2002) has found that international posture is associated with willingness to communicate, which in turn, positively impacts English proficiency. However, Mori (2010) has noted that "Japanese students tend to shrink from international experience" (p. 69), and the Japanese Minister of Education has lamented their "inward looking passivity" (Shimomura, 2013, "Why internationalization?" para. 5). Therefore, these conceptualizations of culture may potentially impact English proficiency and are worthy of further investigation.

A third way to critically evaluate current thinking is to revisit the depictions of students in the academic literature. As mentioned previously, Watkins and Biggs (1996) have asserted that students who engage in Confucian approaches to learning, including memorization and repetition, can achieve deep learning, a phenomenon they have termed as the "Chinese paradox." Tran (2013) has characterized the depictions of CHC learners as passive, compliant, and reliant on rote memorization, as over-generalizations, and has asserted that these depictions are in stark contrast to depictions in the literature of Western students as independent, questioning, and active. As mentioned before, Tran (2013) has maintained that learning approaches are influenced more by pedagogical practices and course requirements than by culture. Furthermore, O'Dwyer (2017) has called for "Deflating the 'Confucian Heritage Culture' thesis in intercultural and academic English education" (p. 198), and has challenged the notion of culturally distinct learning habits of so-called CHC students. O'Dwyer (2017) has also argued that the CHC thesis fails to consider rapid social change or the inherent diversity in Asian societies, and is based on essentialist, reductivist characterizations of Confucian Heritage Cultures. He has therefore recommended that teachers search elsewhere to understand students' learning approaches and challenges.

Another way to critically evaluate current thinking is to challenge culturally-based assumptions about optimal educational practice. In his research, Tran (2013) found that students from Confucian Heritage Cultures disputed the notion of teachers as providers of information. However, O'Dwyer (2006) has problematized the binary juxtaposition in ELT literature of teacher-centered, authoritative approaches versus student-centered approaches. This dichotomy, he argued, which generally favors student-centered over teacher-centered approaches, is based on "flawed epistemological assumptions about how knowledge is generated in linguistic practice" (p. 2),

including the notion that generating new knowledge takes precedence over the acquisition of traditional knowledge. He (2006) has also argued that in language classrooms, students experiment and co-construct language, but need a teacher or skilled language speaker to guide and monitor their discovery, as well as being a linguistic exemplar, which by definition, requires components of a teacher-centered approach. He concluded that student-centered approaches complement rather than conflict with teacher-centered approaches.

Finally, a critical evaluation of current thinking should involve Goodfellow and Lamy's (2009) problematization of essentialist frameworks that are predicated on assumptions that learners' thoughts and behaviors are products solely of their cultural and national origins. These theoretical approaches, they cautioned, may fail to account for individual differences within cultures. Bokhari and Panhwar's (2014) study, for instance, was motivated by the significant diversity within the borders of Pakistan. As discussed above, the preferences expressed by the Japanese participants in the current study did not, in many cases, reflect their depictions in the academic literature, and could possibly have been impacted by a diversity of learning approaches gained through exposure to a variety of pedagogies. It is thus plausible that, unlike Hunt and Tickner (2015) and Sobodić et al. (2017) who suggested that the lack of diversity in their samples may have contributed to non-significant findings, the diversity of the current sample of Japanese students may have actually contributed to non-significant findings, which in turn problematizes the use of essentialist frameworks. Furthermore, Jung et al. (2012) have cautioned that pedagogical and instructional innovations from the West cannot and should not be imported into Asian contexts without first giving due consideration to culture, and Fougère and Moulettes (2007) have challenged theoretical frameworks, constructed from an Anglo/Western paradigm, which portray "individualistic" societies as "more educated, more literate, more wealthy . . . [and] more questioning" (p. 11). That said, it is important to note that this study did not seek to essentialize "non-Western cultures" versus "Western cultures" (Apple & DaSilva, 2017, p. 229), but to explore patterns of learned and shared behavior, which according to Bennett (2016), does not stereotype or assume that all individuals within groups conform precisely to these patterns.

Conclusion

The problem addressed in this study was the low levels of English language proficiency among Japanese students despite the efforts of Japan's Ministry of Education to raise proficiency. Based on research indicating that cultural factors may influence the language learning of Japanese students (Harumi, 2011; Rivers, 2011; Seilhamer, 2013), and on the need to consider the impact of culture on learning (Sulkowski & Deakin, 2009), this study investigated the extent to which cultural learning preferences (Parrish and Linder-VanBerschot, 2010) impact English proficiency among freshman Japanese university students at one university. The fact that the data did not reveal strong preferences for most of the cultural learning preferences suggests a diversity of learning approaches among the participants, as well as possible limitations within the instruments and data collection. On the other hand, strong preferences for social relationships dimensions could potentially impact social interaction and communicative competence, which were not measured by the TOEFL ITP. The lack of statistically significant relationships between cultural learning preferences and TOEFL scores in this study may be attributable to the lack of strong preferences for most categories.

Future Research

There is a strong case to be made for the reporting of non-significant data, as it forces researchers to critically evaluate current thinking. Therefore, future iterations of this study should explore different approaches to conceptualizing and operationalizing the variables under investigation—culture and English language proficiency—and also revisit cultural depictions of students in the

academic literature. It is also worth investigating the extent to which the responses to the CDLF would differ if it were administered in other instructional environments, including other subjects taught by Japanese teachers. Future studies should also challenge culturally-based assumptions about optimal pedagogical approaches, while probing the limitations of essentialist frameworks, particularly those constructed from Anglo/Western perspectives, for examining educational practices in Asia. Such frameworks should be utilized to explore patterns of shared and learned behavior, while remaining cognizant of diversity within cultural groups, and the inherent complexity of the impact of culture on learning. As Matosin et al. (2014) stated, “Negative findings are fundamental to science: They encourage good scientific practice, teach us to critically analyze our pre-existing thoughts, and direct new avenues of research” (p. 172). This explanatory study sought to contribute to such critical evaluation and to provide a springboard for further investigation.

About the Author

Margaret M. Lieb, Ed.D. is an Associate Professor at Mukogawa Women’s University, Nishimomiya, Japan. She has taught students of all ages and proficiency levels in Ireland, the United States, and Japan, and has given presentations at conferences throughout Asia, the United States, and Europe. Her research area is sociolinguistics and intercultural communication.

References

- Aoki, M. (2017, April 6). Japan’s latest English-proficiency scores disappoint. *The Japan Times*. Retrieved from <https://www.japantimes.co.jp/news/2017/04/06/national/japans-latest-english-proficiency-scores-disappoint/#.W0L-v62B18c>
- Apple, M. T. & Da Silva, D. (2017). Language learning motivation in Asia: Current trajectory and possible future. In M. T. Apple, A. D. Da Silva, & T. Fellner (Eds.) *L2 Selves and Motivations in Asian Contexts* (pp. 228-238). Bristol, UK: Multilingual Matters.
- Arenas-Gaitán, J., Ramirez-Correa, P. E., & Rondan-Cataluña, F. J. (2011). Cross cultural analysis of the use and perceptions of web-based learning systems. *Computers & Education*, 57, 1762-1774. doi: <https://dx.doi.org/10.1016/j.compedu.2011.03.016>
- Armstrong, R. A. (2014). When to use the Bonferroni correction. *Ophthalmic and Physiological Optics*, 34, 502-508. doi: <https://dx.doi.org/10.1111/opo.12131>
- Ashouri, A. F., & Fotovatnia, Z. (2010). The effect of individual differences on learners’ translation belief in EFL learning. *English Language Teaching*, 3(4), 228-236. Retrieved from <http://www.ccsenet.org/journal/index.php/elt/article/view/37033>
- Bennett, M. J. (2016). Intercultural competence for global leadership. *IDR Institute, Intercultural Development Research*. Retrieved from https://www.idrinstitute.org/wp-content/uploads/2018/02/Global_ICC_IDRI.pdf
- Bokhari, S. R., & Panhwar, I. A. (2014). Understanding online cultural learning styles and academic performance of management students in an ethnic context. In J. Keengwe, G. Schnellert, & K. Kungu (Eds.) *Cross-Cultural Online Learning in Higher Education and Corporate Training* (pp. 149-169). Hershey, PA: Information Science Reference. doi: <https://dx.doi.org/10.4018/978-1-4666-5023-7.ch008>

- Boland, G., Sugahara, S., Opdecam, E., & Everaert, P. (2011). The impact of cultural factors on students' learning style preferences. *Asian Review of Accounting*, 19(2), 243-265. doi:10.1108/13217341111185155
- Brown, H. D. (2014). *Principles of language learning and teaching*. (6th ed.). White Plains, NY: Pearson Education.
- Chamont, A. U. (2004). Issues in language learning strategy research and teaching. *Electronic Journal of Foreign Language Teaching*, 1(1), 14-26. Retrieved from <http://e-flt.nus.edu.sg/v1n12004/chamot.pdf>
- Cho, Y. & Bridgeman, B. (2012). Relationship of TOEFL iBT scores to academic performance: Some evidence from American universities. *Language Testing*, 29(3), 421-442. doi: 10.1177/0265532211430368
- Chu, M.-P., & Nakamura, T. (2010). A study of Chinese and Japanese college students' 12 learning styles. *Asian Culture and History*, 2(2), 30-44.
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson.
- DeVellis, R. F. (2011). *Scale development: Theory and applications* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- De Vita, G. (2001). Learning styles, culture and inclusive instruction in the multicultural classroom: A business and management perspective. *Innovations in Education and Teaching International*, 38(2), 165-174. doi: 10.1080/14703290110035437
- Dennison, P. (2012). Reflective practice: The enduring influence of Kolb's Experiential Learning Theory. *Compass: Journal of Learning and Teaching*, 1(1). doi: <http://dx.doi.org/10.21100/compass.v1i1.12>
- Dornyei, Z. & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration and processing* (2nd ed.). New York: Routledge.
- English First English Proficiency Index (EF EPI). (2017). EF English Proficiency Index. Retrieved from <https://www.theewf.org/uploads/pdf/ef-epi-2016-english.pdf>
- ETS. (2011). *TOEFL iBT Research Insight: Validity evidence supporting the interpretation and use of TOEFL iBT scores*. Retrieved from https://www.ets.org/s/toefl/pdf/toefl_ibt_insight_s1v4.pdf
- ETS. (2016a). *Test and score data summary for TOEFL iBT tests: January 2016-December 2016*. Retrieved from https://www.ets.org/s/toefl_itp/pdf/toefl-itp-test-score-data-2016.pdf
- ETS. (2016b). *2016 Report on test takers worldwide: The TOEIC listening and reading test*. Retrieved from http://www.iibc-global.org/library/default/toeic/official_data/pdf/Worldwide2016.pdf
- ETS. (2017a). *Test and score data summary for TOEFL iBT tests*. Retrieved from http://www.ets.org/s/toefl/pdf/94227_unlweb.pdf#search=%27ETS+test+and+score+data+summary
- ETS. (2017b). *TOEFL ITP assessment series*. Retrieved from http://www.ets.org/toefl_itp
- Fanelli, D. (2012). Negative results are disappearing from most disciplines and countries. *Scientometrics*, 90, 891-904.

- Fougère, M. & Moulettes, A. (2007). The construction of the modern west and the backward rest: Studying the discourse of Hofstede's culture's consequences. *Journal of Multilingual Discourses*, 2(1), 1-19.
- Golubovich, J., Tolentino, F., & Papageorgiou, S. (2018). Examining the applications and opinions of the TOEFL ITP® assessment series test scores in three countries. *ETS Research Report Series, 2018*, 1-30. Retrieved from <https://onlinelibrary.wiley.com/doi/epdf/10.1002/ets2.12231>
- Gunawardena, C. N., Nolla, A., Wilson, P., López-Islas, J., Ramírez-Angel, N., & Megchun-Alpizar, R. (2001). A cross-cultural study of group processes and development in online conferences. *Distance Education*, 22(1), 122-136.
- Goodfellow, R. & Lamy, M.-N. (2009). Introduction: A frame for the discussion of learning cultures. In R. Goodfellow & M.-N. Lamy (Eds.), *Learning cultures in online education* (pp. 1-14). London: Continuum.
- Hall, E. T. (1983). *The dance of life*. New York: Doubleday.
- Hargett, G. R. (1998). *Assessment in ESL & bilingual education: A hot topics paper*. (Report No. 141). Northwestern Regional Educational Laboratory, Portland, OR: NWREL
- Harumi, S. (2011). Classroom silence: Voices from Japanese EFL learners. *ELT Journal* 65(3), 260-269. doi: <https://dx.doi.org/10.1093/elt/ccq046>
- Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of Intercultural Relations*, 10(3), 301-320.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1). doi: 10.9707/2307-0919.1014
- Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations: Software of the mind*. New York: McGraw-Hill.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind*. (3rd ed.). New York: McGraw-Hill.
- Huck, S. W. (2012). *Reading statistics and research*. (6th ed.). Boston: Pearson.
- Hunt, A. N. & Tickner, S. (2015). Cultural dimensions of learning in online teacher education. *Journal of Open, Flexible, and Distance Learning*, 19(2), 25-47.
- International Association for the Evaluation of Educational Achievement. (IEA) (2018). *TIMSS 2015 International results in mathematics*. Lynch School of Education, Boston College. Retrieved from: <http://www.iea.nl/timss-2015>
- Jackson, T. (2011). From cultural values to cross-cultural interfaces: Hofstede goes to Africa. *Journal of Organizational Change Management*, 24(4), 532-558. doi: 10.1108/09534811111144656
- Javid, C. Z., Al-thubaiti, T. S., & Uthman, A. (2013). Effects of English language proficiency on the choice of language learning strategies by Saudi English-major undergraduates. *English Language Teaching*, 6(1), 35-47. doi: <https://dx.doi.org/10.5539/elt.v6n1p35>
- Jost, J. & Hunyady, O. (2003). The psychology of system justification and the palliative function of ideology. *European Review of Social Psychology*, 13, 111-153.

- Jung, I., Kudo, M., & Choi, S.-K. (2012). Stress in Japanese learners engaged on online collaborative learning in English. *British Journal of Educational Technology*, 43(6), 1016-1029. doi: <https://dx.doi.org/10.1111/j.1467-8535.2011.01271.x>
- Levine, R. (1997). *A geography of time: The temporal misadventures of a social psychologist, or how every culture keeps time just a little bit differently*. New York: Basic Books.
- Lewis, R. D. (2006). *When cultures collide: Leading across cultures* (3rd ed.). Boston: Nicholas Brealey International.
- Li, Y., Medwell, J., Wray, D., Wang, L. & Liu, X. (2016). Learning styles: A review of validity and usefulness. *Journal of Education and Training Studies*, 4(10), 90-94. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1111359.pdf>
- Linder-VanBerschot, J. A., & Barbera, E. (2012). Yao! iSi! Yes!: International perceptions of online education. *Distance Learning*, 9, 73-85.
- Matosin, N., Frank, E., Engel, M., Lum, J. S., Newell, K. A. (2014). Negativity towards negative results: A discussion of the disconnect between scientific worth and scientific culture. *Disease Models & Mechanisms* 7, 171-173. Retrieved from <http://dmm.biologists.org/content/7/2/171>
- McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith – a failure of analysis. *Human Relations*, 55(1), 89-118. doi: 10.1177/0018726702551004
- MEXT. (2002). *Developing a strategic plan to cultivate "Japanese with English abilities."* Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN008142.htm>
- MEXT. (2011a). *Five proposals and specific measures for developing proficiency in English for international communication*. Retrieved from http://www.mext.go.jp/component/english/_icsFiles/afieldfile/2012/07/09/1319707_1.pdf
- Mirdehghan, M., HoseiniKargar, N., Navab, S., & Mahmoodi, T. (2011). Cultural barriers: Pros and cons on ELT in Iran. *International Journal of English Linguistics*, 1(1), 15-20. Retrieved from <http://www.ccsenet.org/journal/index.php/ijel/article/view/8958>
- Mori, J. (2010). G30 and its implications for Japan. *The International Center Research Bulletin, Kyoto University*, 1(2), 63-71.
- Muslimin, A. (2017, November 30). Why Asian countries are investing so heavily in the English language. *Forbes Magazine*. Retrieved from <https://www.forbes.com/sites/anismuslimin/2017/11/30/why-asian-countries-are-investing-so-heavily-in-the-english-language/>
- Nisbett, R. E. (2003). *The geography of thought: How Asians and Westerners think differently . . . and why*. New York: Free Press.
- OECD. (2018). *Program for international student assessment (PISA): Japan Student Performance*. Retrieved from: <http://gpseducation.oecd.org/CountryProfile?primaryCountry=JPN&treshold=10&topic=PI>
- O'Dwyer, S. (2006). The English teacher as facilitator and authority. *TESL-EJ* 9(4), 1-15. Retrieved from <http://www.tesl-ej.org/ej36/a2.pdf>

- O'Dwyer, S. (2017). Deflating the 'Confucian heritage culture' thesis in intercultural and academic English education. *Language, Culture, and Curriculum*, 30(2), 198-211.
doi: <https://dx.doi.org/10.1080/07908318.2016.1259321>
- Ortner, S. (2003, April 20). East brain, west brain [Review of the book *The geography of thought*, by R. E. Nisbett]. *The New York Times*. Retrieved from <https://www.nytimes.com/2003/04/20/books/east-brain-west-brain.html>
- Papageorgiou, S. & Cho, C. (2014). An investigation of the use of TOEFL Junior Standard scores for ESL placement decisions in secondary education. *Language Testing*, 31(2), 223-239.
doi: <https://dx.doi.org/10.1177/0265532213499750>
- Parrish, P., & Linder-VanBerschoot, J. P. (2010). Cultural dimensions of learning: Addressing the challenges of multicultural instruction. *The International Review of Research in Open and Distance Learning*, 11(2), 1-19. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/809/1497>
- Rivers, D. J. (2011). Japanese national identification and English language learning processes. *International Journal of Intercultural Relations* 35(2011), 111-123. doi: <https://dx.doi.org/10.1016/j.ijintrel.2010.09.006>
- Rosenman, R., Tennekoon, V. & Hill, L. G. (2011). Measuring bias in self-reported data. *International Journal of Behavioural and Healthcare Research*, 2(4), 320-332. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4224297/pdf/nihms-594650.pdf>
- Sakamoto, M. (2012). Moving towards effective English language teaching in Japan: Issues and challenges. *Journal of multilingual and multicultural development* 33(4), 409-420.
doi: <https://dx.doi.org/10.1080/01434632.2012.661437>
- Seilhamer, M. F. (2013). Obstacles to Japanese membership in the imagined global community of English users. *The Language Teacher*, 37(5), 39-43.
- Shimomura, H. (2013, September 2). Making Japanese higher education more international. *The Japan Times*, p. B1. Retrieved from http://info.japantimes.co.jp/ads/pdf/20130902_global_30_universities.pdf
- Sim, M. & Roger, P. (2016). Culture, beliefs and anxiety: A study of university-level Japanese learners of English. *Asian EFL Journal* 18(4), 26-77.
- Sobodić, A., Balaban, I., & Tomašević, M. (2017). The impact of cultural dimensions on students' use of e-learning system. *Faculty of Organization and Informatics Department of Computing and Technology*. Pavlinska 2, 42000 Varaždin. Retrieved from https://bib.irb.hr/datoteka/897455.The_Impact_of_Cultural_Dimensions_on_Students_Use_of_E-learning_System.pdf
- Stewart, T. (2009). Will the new English curriculum for 2013 work? *The Language Teacher*. Retrieved from http://scholar.google.co.jp/scholar_url?url=https://jalt-publications.org/files/pdf-article/33.11-art2.pdf&hl=en&sa=X&scisig=AAGBfm1Eepaw2ROhFLGND3m3MYXJXXJZpw&noss=1&oi=scholar
- Sulkowski, N. B., & Deakin, M. K. (2009). Does understanding culture help enhance students' learning experience? *International Journal of Contemporary Hospitality Management*, 21(2), 154-166. doi:10.1108/09596110910935651

- Tapanes, M. A., Smith, G. G., & White, J. A. (2009). Cultural diversity in online learning: A study of the perceived effects of dissonance in levels of individualism/collectivism and tolerance of ambiguity. *Internet and Higher Education*, 12(2009), 26-34.
doi: <https://dx.doi.org/10.1016/j.iheduc.2008.12.001>
- Tran, T. T. (2013). Is the learning approach of students from the Confucian heritage culture problematic? *Educational Research for Policy and Practice*, 12, 57-65.
doi: <https://dx.doi.org/10.1007/s10671-012-9131-3>
- Watkins, D. & Biggs, J. (1996). *The Chinese learner: Cultural, psychological, and contextual influences*. Hong Kong: CERC & ACER.
- White, M. (1987). *The Japanese educational challenge: A commitment to children*. New York, NY: The Free Press.
- Yashima, T. (2002). Willingness to communicate in a second language: The Japanese EFL context. *The Modern Language Journal*, 86, 54-66.
- Zieghan, L. (2001). Considering culture in the selection of teaching approaches for adults. *ERIC Digest*. Retrieved from <http://www.ericdigests.org/2002-3/culture.htm>