THESIS

THE HOFSTEDE MODEL AND NATIONAL CULTURES OF LEARNING: A COMPARISON OF UNDERGRADUATE SURVEY DATA

Submitted by

John Matthew Whalen

Department of English

In partial fulfillment of the requirements

For the Degree of Master of Arts

Colorado State University

Fort Collins, Colorado

Summer 2016

Master's Committee:

Advisor: Tatiana Nekrasova-Beker
Co-Advisor: Tony Becker

Jean Opsomer

ABSTRACT

THE HOFSTEDE MODEL AND NATIONAL CULTURES OF LEARNING:

A COMPARISON OF UNDERGRADUATE SURVEY DATA

Researchers in cross-cultural pedagogy often invoke the work of Hofstede (1980; 1986) and Hofstede, Hofstede, and Minkov (2010) to explain variation in classroom behavioral norms across countries (e.g. Cronjé, 2011; Li & Guo, 2012; Tananuraksakul, 2013). Although Hofstede' s model of culture was developed from IBM employee surveys to facilitate cross-cultural management, Hofstede explicitly suggests that his findings can be generalized to student and teacher behavior in the classroom. The present study tests this suggestion by administering an online survey to university students (n=625) in the following countries: USA (n=181), South Africa (n=l03), China (n=64), Turkey, (n=60), Russia, (n=59), Finland (n=58), Vietnam (n=52), and France (n=48). Although the number of countries included in this study is too low to produce globally generalizable results, a statistical comparison of national means on each item fails to support Hofstede's predictions about how national culture manifests in the classroom for these particular countries. Instead, provisional support is found for the creation of a new set of cultural dimensions for the specific purpose of studying classroom culture, with three such dimensions emerging from a principal components analysis of the present data set. The examination of national differences on individual items in this survey can also be useful for travelling instructors of English-speaking university classrooms.

ACKNOWLEDGEMENTS

I'd like to thank my professors in the MA TEFL/TESL program at Colorado State University for their assistance in preparing me for this project and for their support in completing it: Tatiana Nekrasova-Beker, Anthony Becker, Gerald Delahunty, Douglas Flahive, and Cory Holland. I'd also like to thank Professor Jean Opsomer for his support as my extra-departmental reader for the data analysis portion of this project. Finally, I'd like to thank my TEFL/TESL cohort, all of whom assisted and supported me in various ways throughout this program of study and this project.

TABLE OF CONTENTS

Introduction

When teachers from one culture encounter students from another, a multitude of cultural issues can arise. Writers on cross-cultural pedagogy have been cautioning teachers about these issues since at least the middle of the twentieth century (e.g. Lado, 1957), but the findings of qualitative studies on the topic can be difficult to relate to one another and are sometimes at odds (e.g. Ryan, 2013; Chan, 1999). A system for codifying and differentiating cultural issues in the classroom on a global scale, which could help researchers to contextualize their findings and travelling teachers to adjust their pedagogy, has yet to be developed. In lieu of such a dedicated system, scholars in this area frequently invoke the Hofstede (1980) model of culture studies to explain cultural differences issues in the classroom.

This has likely occurred because Hofstede (1980; 1986; 2001) and Hofstede, Hofstede, and Minkov (2010) speculate in detail about how the Hofstede model might apply to differences in classroom expectations and behavioral norms across countries. These claims have been utilized by authors and researchers such as Nguyen, Terlouw, and Pilot (2006), Parrish and Linder-Vanberschot (2010), Cronjé (2011), Li and Guo (2012), and Tananuraksakul (2013). However, those claims about culture in the classroom are based on Hofstede's study of workplace culture, not classroom culture. Hofstede was hired by IBM around 1970 to help the company figure out how to better manage its staff in various countries. Hofstede (1980) performed factor analysis on ~116,000 employee surveys from ~88,000 respondents and found that the respondents' preferences and workplace values could be systematized across national cultures according to four (later expanded to six) dimensions, each of which correlated strongly with external national indices such as GDP, rate of obesity, and subjective well-being. However, the generalization of his findings to students is potentially problematic for reasons involving his

instrument, his respondents, and his lack of supporting research to corroborate this use of his work. First, Hofstede's survey asked questions about the workplace, not about the classroom. This introduces a potential issue of construct validity for use of his work to systematize student preferences and behavioral norms, as it's possible that his survey elicited a values system that doesn't exist for students who haven't held professional jobs yet. Second, his data were collected from middle-aged employees at a major tech company in the 60s and 70s, not from students in the 2000s. This introduces plausible demographic moderator variables, such as age, occupation, and change of national culture over time. Last, Hofstede occasionally cites other studies to support his claims about culture in the classroom, but those studies tend to involve very few countries and to relate only tangentially to his claims (e.g. Cox & Cooper, 1977), leaving the claims largely speculative as a whole. When these issues are all considered together, the question arises of whether writers and researchers in cross-cultural pedagogy might be mistaken in treating Hofstede's anecdotal suggestions as fact and using them to shape educational practice.

The framework has certainly been a convenient tool for teachers and pedagogical researchers. For example, Nguyen, Terlouw, and Pilot (2006) use it to explain why "Western" styles of instruction mandated by the government of Hong Kong may have experienced pushback from teachers, students, and parents, and Cronjé (2011) uses it to facilitate the cultural aspects of a teacher exchange program between South Africa and Sudan. These authors, and many others, use Hofstede's work to expand the global conversation about cross-cultural education in compelling ways. However, predicating such work on a model that has not been validated for this purpose necessitates empirical scrutiny in order to maintain the integrity of that conversation.

Review of Literature

In order to analyze the function of culture in the classroom, it's important to analyze the nature of culture. “Culture” is one of the 2,000 most common words in the English language (British National Corpus), but its definition has been debated by anthropologists since at least the 1800s, and “culturologists” today continue to debate its proper meaning (Minkov, 2013). In the early 19th century, writers such as Arnold (1869) conceived of culture as the collected artistic and intellectual endeavors by a group of people (Spencer-Oatey, 2012). In 1871, Edward Tylor broadened this definition by labeling culture as, “that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society” (Tylor, 1871, p. 1). Tylor's definition has since become "the foundational one for anthropology," (Spencer-Oatey, 2012, p. 1). The distinction between the notion of culture as comprising artistic and intellectual achievements and the notion of culture as a more comprehensive whole—comprising not just institutions, but also customs and habits—remains important today. Modem writers on cross-cultural communication often refer to the artistic and intellectual elements of culture as “big C Culture” or “objective culture,” whereas the customs and habits that Tylor (1871) points to are referred to as “little c culture” or “subjective culture,” (Bennet, 2013, p.7). Objective culture comprises institutions such as politics, economics, fine arts, historical figures, systems of education, and explicit social rules. Subjective culture refers to more ephemeral phenomena, such as pop art, daily habits, nonverbal communication patterns, implicit relationship norms, and otherwise uncodified knowledge. Combined, objective and subjective culture represent a variegated and ever-changing human context that can be used to describe group characteristics at any scale, such as cross-national, national, state, town, or family.

Although culture is experienced and enacted by people, the culture of a group can outlive its individual participants. While examining cultures at the national level, Hofstede, Hofstede, and Minkov (2010) compare nations to organisms, citizens to cells, and cultures to DNA—because its cells (citizens) continue to pass on the same DNA (culture) across generations, any given organism (country) retains its identity long after its original cells have died and been replaced (p. 26). And cultures, like organisms, can stay consistent for long periods, evolve gradually over time, or adapt to sudden changes. As Bennet (2013) points out, "...in a circular, self-referential process, the institutions of culture are constantly recreated by people enacting their experiences of those institutions," (p. 7). In replicating our experiences of culture, we perpetuate the phenomena that impressed them. Hofstede, Hofstede, and Minkov (2010) go so far as to argue that, "National value systems should be considered given facts, as hard as a country's geographical position or its weather" (p. 20).

However, some researchers have found evidence that cultures do change across decades. Inglehart (2008) demonstrated that survey respondents in various countries around Western Europe showed increasingly convergent attitudes toward a construct that the researcher called "self-expression" from 1970 to 1990, though this trend did not continue from 1990-2006 (Minkov, 2013). Other researchers have used questionnaire research to demonstrate short-term adaptations in national culture, such as the effect of the terrorist attacks of 9/11 on Americans' tendencies toward constructs such as "collectivism," "power distance," and "cosmopolitanism" (Olivas-Lujan, Harzing, & McCoy, 2004) and "freedom" and "family security" (Murphy, Gordon, & Mullen, 2004). So depending on the foci and methods of a given study, certain aspects of culture may be seen to remain steady, change slowly, or change quickly over time. As Minkov (2013) summarizes:

> The available evidence suggests that the question of how stable or changeable culture is cannot have a definitive answer that is valid for all cases. It depends on the society, on the type and strength of factors that are exerting pressure on its culture, and on the kind of change that is measured. (p. 24)

If Minkov is correct, then not only is the definition of culture still up for debate, but its relationship to space (culture as national, regional, ethnic, etc.) and time (culture as constant or fluctuating) varies considerably across analyses. This inherent complexity of culture as a subject of research has resulted in a variety of methods of cultural analysis that are well-suited to specific research purposes without being inherently more or less valid than one another. There is no universally applicable method of culture study, and no method used is entirely uncontroversial.

Cultures of Learning

Since both objective and subjective culture vary around the globe, it stands to reason that classrooms (like any other setting) around the globe may reflect distinct cultural contexts. Cortazzi and Jin (2011) utilize the term "cultures of learning" to reference this phenomenon, and they introduce their anthology on the topic with the following definition: "Cultures of learning, as a concept, suggests that learning is cultural: members of different cultural communities may have different preferences, expectations, interpretations, values and beliefs about how to learn or how to teach" (p. 1). The purpose of studying cultures of learning is to facilitate learning across cultural communities. When people have grown up in a given cultural community, their understanding of learning strategies and classroom norms will reflect the norms of that community (Charlesworth, 2009). These norms are frequently subconscious (Li, 2013), so people may tend to take their assumptions about learning for granted, not realizing that they are cultural byproducts rather than universal truths. As Lado (1957) remarks, in an early treatment of the topic, "...if we ignore these cultural differences we will misjudge our neighbors ... for

a form of behavior that to them has one meaning and may have another one for us," (p. 8). So different cultures can produce people who hold different notions of learning, may not be conscious of the cultural situatedness of these notions, and are at risk of misinterpreting each other's resultant behavior in the classroom. These misinterpretations can be a serious obstacle for both teachers and students in multicultural classrooms, and since higher education around the world is becoming increasingly multicultural (Daiz, Lasagabaster, & Sierra, 2013; Kumar & Parveen, 2013), culture gaps in the classroom are becoming increasingly prevalent. This has caused scholars in cross-cultural pedagogy (e.g. Abd-Kadir & Hardman, 2011; Chita-Tegmark et al., 2012; Ryan, 2013) to call for a greater focus on cultural variations in learning. As Chita-Tegmark et al. (2012) summarize, "one cannot expect to impact learning in the current moment if the context in which learning has happened in the past is not considered" (p. 17).

Risks of studying culture in the classroom. This call for increased focus on classroom culture is not without its critics. In their overview of prior research on classroom culture, Yuan and Xie (2013) caution that categorizing students by national culture could potentially promote stereotyping by teachers. Cortazzi and Jin (2013) offer the following rejoinder to that argument:

> ...On the contrary, the notion of cultures of learning has been developed precisely to counter stereotypes ... by focusing on specific aspects of real learning and getting those insider perspectives, preferably through research, which illumine the activities and thinking of real teachers or learners in authentic contexts through rich data. (p. 3)

There may be some validity to the concern that paying increased attention to student nationality could make certain teachers feel justified in stereotyping their students—the behavior of every individual teacher is difficult to predict. However, even if studying cultures of learning does promote generalizations by some teachers, that process doesn't have to be derogatory or marginalizing. According to Bennet's (2004) widely-used Developmental Model of Intercultural Sensitivity (DMIS), the denial of such categorical differences between groups is actually the

most ethnocentric (and therefore least interculturally sensitive) phase of intercultural development. The acknowledgement of differences, and the respectful integration of those differences into shared contexts, on the other hand, is the least ethnocentric (Bennet, 2004). Learning how to identify and discuss cultural differences respectfully is a crucial component of developing one's intercultural sensitivity both inside and outside of the classroom, even if it initially produces some degree of awkwardness.

Yuan and Xie (2013) also suggest that, "A possible consequence of the research done from the large-culture [typically national culture] perspective will be that teachers attribute all the students' behaviours in the class to their background culture, which would minimize any effort to improve class teaching," (p. 33). It's true that generalizations based on culture can sometimes exacerbate cultural isolation, even when they are intended to do the opposite; consider the so-called "Pobrecito syndrome," which arises when American students with non-native speaker (NNS) parents with Spanish as a first language (L1) may be held to lower standards than their native speaker (NS) peers due to teachers' assumptions that those students may face cultural and economic obstacles (Soledad, 2013). While a teacher may feel it unfair, for example, that students with NNS parents receive less help on their homework than students with NS parents, holding any group of students to lower standards than their peers may damage that group's self-esteem and self-expectations, ultimately exacerbating the inequality rather than mitigating it (Soledad, 2013). In cases such as this, it's possible for attempts at cultural sensitivity to backfire, and it's possible for teachers to do a disservice for the students they're trying to accommodate. Such cases give some credence to Yuan and Xie's (2013) concern. However, any tool can be misused; specific instances of problematic attempts to provide culturally sensitive pedagogy do not categorically invalidate the study of cultures of learning.

Last, researchers such as Ryan (2013) point out that classroom culture may be evolving in different places at different rates, so it's unreliable to generalize findings across time when they may actually become outdated very quickly. Ryan performed qualitative interviews with academics in China, the US, the UK, and Australia, and concluded that, "Western academics with direct experience in China describe the pace of change [in Chinese classroom culture] as breathtaking. Chinese academics express positive opinions about the direction of change in China but almost universally express a desire for this to be accelerated" (p. 53). Ryan's findings suggest that different paradigms of education may come and go at different rates in different countries, rapidly invalidating previous findings on classroom culture.

Cultures of learning and English as a second/foreign language. Although cultures of learning are written about by researchers in various fields (e.g. anthropology, culture studies, and language acquisition), they are especially relevant to researchers in the area of teaching English as a second or foreign language (ESL/EFL) for the reasons that (1) ESL/EFL study connects cultural groups and that (2) language study is culturally embedded.

It's easy to demonstrate that EFL/EFL connects cultural groups. According to *Ethnologue,* there are 335 million native speakers of English in the world but over 500 million nonnative speakers of English (Lewis, Paul, Simons, & Fennig, 2015). Graddol (2006) estimated that this number may rise to 2 billion by the year 2020, though the prediction is now somewhat dated. Even so, an increasing majority of worldwide students of English are learning English a second or foreign language. Within the USA, the U.S. Department of Education (2006) estimates that by 2025, 1 in 4 students at U.S. primary and secondary schools will be an English language learner (ELL) (p. 1). ESL/EFL education often occurs between cultural groups, with either

teachers travelling from NS countries to NNS countries or by NNS students travelling to NS countries to study. In either case, a culture gap will be present.

But even in the case that EFL is taught to NNS students by local, NNS teachers, "the language and culture of a people are inextricable" (Bacha & Bahaus, 2013, p. 123), so the export of English frequently involves the export of Anglo-American pedagogy as well (see also Doiz, Lasagabaster, & Sierra, 2013; Kumar & Parveen, 2013). The reason for this cultural embeddedness of language is speculated on but difficult to explain conclusively-the simplest explanation is referred to as the "cultural accommodation hypothesis," a theory that both NNS teachers and NNS students may respond to perceived cultural norms in the L2 culture that they have observed externally, such as in popular media or while travelling personally (Chen & Bond, 2010). This results in the presence of L2 culture in the language classroom even when neither the students nor the teacher are from that culture.

This hypothesis suffers criticism in the case of EFL, as English occupies a unique position among world languages. As Nizegorodcew (2011) argues, “English as the main European lingua franca has been dissociated, at least partly, from its national culture/s due to the contexts in which it is used by non-native speakers,” (p. 7). Since English is so widely spoken as a second language, Nizegorodcew suggests, students may no longer associate it with Anglo- American culture exclusively, but with local NNS subcultures instead. His argument focuses on Europe, but English is clearly a lingua franca around the world in music, movies, business, aviation, and scholarship.

However, despite the difficulty of observing the relationship of language and culture directly, several studies have demonstrated statistically significant correlations between use of English and behavior associated with Anglo-American culture. For example, Li and Guo (2012)

compared the classroom behaviors of 14 Chinese teachers of English with 12 Chinese teachers of other subjects at the same university in China by analyzing student evaluations. The researchers administered a student survey modeled after Hofstede's (1980) framework of culture studies and found statistically significant tendencies of English teachers to exhibit more "Western" classroom behaviors than their colleagues in other departments. This indicates that Anglo-American culture may be embedded in ESL/EFL pedagogy even when taught in NNS environments by local, NNS instructors. Note that the construct of Western behavior was formed by *theoretical* differences in learning style, such as respect for student opinions in the classroom, which may or may not reflect empirical realities of East-West classroom differences.

Chen and Bond (2010) also provided some support for the cultural accommodation hypothesis with a study that assessed 213 bilingual (Chinese and English) university students in Hong Kong according to the Big Five personality inventory (John, 1990), written in English for half of the students, and written in Chinese for the other half. The results indicated a statistically significant effect of language on aggregated personality. These findings were corroborated by a qualitative interview component of the same study.

Finally, a quasi-experimental study by Akkermans, Harzing, and Witteloostuijn (2010) suggested that the relationship between language and culture can be observed not only in attitudinal studies, but also in behavioral ones. They invited 348 Dutch college students to participate in experiments based off of the Prisoner's Dilemma game, for a total of 12,180 game rounds. The game involves pairing participants and having them select to behave cooperatively or competitively each round, and according to previous research, Americans are more likely to choose the competitive option than Dutch people are. Of the 348 Dutch college students who participated, half played the game in English, and half played it in Dutch and it was found that

students who played the game in English were significantly more likely to elect competitive strategies over cooperative ones when compared to participants who played it in Dutch, and the differential increased further if the participants reported having spent 3 months or more in an English speaking country. These findings enhance those of Li and Guo (2012) and Chen and Bond (2010) by lending support to the cultural accommodation hypothesis in observed behavior as well as survey data. Much EFL/ESL education takes place with an inherent NS-NNS culture gap. And although researchers such as Nizegorodcew (2011) raise theoretical objections to the notion of culture gaps in NNS teacher, NNS student environments, empirical studies suggest that a culture gap does still exist in ESL/EFL classrooms. These classrooms are therefore likely to be cultural hotspots for the exchange of culture regardless of teacher/student cultural identity.

Due to the close relationship between language and culture, it has become common for ESL/EFL teachers to be expected by their departments to teach an element of L2 culture in their class, often in the pursuit of "intercultural competence" that will facilitate foreign travel (Otwinowska-Kasztelanic, 2011). But learning about a country's culture in general is not equivalent to learning about that country's culture of learning (Chita-Tegmark et al., 2012). For example, an EFL student in France may learn about U.K. culture in general, including topics such as politics, art, and food, but be shocked to find that U.K. undergraduates are more likely to call their professors by first name than by any more formal appellation (Harzing, 2010). Developing general intercultural competence is useful for some purposes, but for academic purposes, it may not be sufficient. In extreme circumstances, academic success for cross-cultural students may even require that the students develop a new "academic identity" that's significantly different from the "social identity" they've developed in their home cultures (Bacha & Bahous, 2013, p. 117). It's not

hard to imagine how this cognitive dissonance could adversely affect the ESL/EFL student experience.

Emic studies of cultures of learning. This need for dedicated study of cultures of learning has inspired a large amount of research by ESL/EFL scholars. They have most often followed the paradigm of emic culture studies, which are characterized by an "insider's" approach that examines cultures in themselves and on their own terms; this is differentiated from an etic, or "outsider's" approach, which involves examining the differences between many cultures at once according to external criteria (Markee, 2013). Emic studies in cultures of learning are common, and recent anthologies on this approach abound (e.g. Oxford, 1996; Palfreyman & Smith, 2003; Arabski & Wojtaszek, 2011; Jin & Cortazzi, 2013; Cortazzi, & Jin, 2013).

One example of an emic study of classroom culture is Bogdanowska-Jakubowska (2011), which discusses that in Polish culture, "Modesty was, and still is, considered by some Poles one of the fundamental values that should be acquired by young people," (p. 171). Conversely, "Americans show to others the self-image of a self-satisfied, successful person, who should be appreciated and approved of," (p. 174). This difference can be useful in helping Polish and American exchange students to adapt to their new social environments. However, the small number of participants in the study (n = 56)—which is common for emic analyses—limits the generalizability of the findings. In more extreme cases, the narrow focus of emic research results in contradictory findings between studies that are difficult to reconcile. For instance, Chan (1999) concludes his qualitative analysis of the Chinese learner by summarizing that, "The type of learning required to be literate in the Chinese language means that effort and repetition are key factors for academic success" (p. 303). For any Western educator intending to teach in China,

Chan suggests, understanding these key factors is a prerequisite for success. Ryan (2013) takes issue with this argument, asserting that, "views of Chinese learners as passive, rote learners have been effectively debunked" (43). In a case such as this one, it can be difficult for ESL/EFL practitioners to assess the strengths of the opposing perspectives without dedicating a great deal of time to their own secondary research. For practitioners who want results that can be more easily generalized, and thus applied more broadly to pedagogy, etic studies provide a more convenient solution.

Etic studies of classroom culture. Studies on classroom culture that take an etic, or "outsider's" approach, offer quantitative distinctions between many groups at once (Markee, 2013). This broad but shallow approach means that etic studies lend themselves to generalizability but run the risk of over-simplifying complex phenomena, and they suffer a great deal of methodological criticism on this point in comparison to emic studies. In the area of cultures of learning, etic studies have been relatively uncommon. One example of an etic study in cultures of learning is Joy and Kolb (2009), which examined the effects of nationality, gender, age, and area of study on scores for Kolb's (2005) Learning Style Inventory (KLSI) for 533 individuals from USA, Italy, Germany, Poland, Brazil, India and Singapore. The results of an ANOVA analysis indicated that culture had a significant effect on KLSI scores, though the effect size was small (2%).

Parrish and Linder-Vanberschot (2010) devised a 36-item survey for the purpose of comparing the educational beliefs of students across cultures, an aim very close to the focus of the present study, though they didn't administer their survey to any respondents. The questions in that survey are research-based, incorporating input from writers and researchers such as Levine (1997), Nisbett (2003), and Hofstede and Hofstede (2005), but the design of

the resultant survey is somewhat problematic; an average student respondent could not be reasonably expected to interpret a question such as the following, in Figure 1.

Explanations are incomplete uncles they clearly show the cause and effect.	1 2 3 4 5 6 7 8 9 10	Explanations are incomplete unless they identify all factors potentially influencing a situation, even if there is no clear cause and effect mentioned.

Figure 1. Sample question from Parrish and Linder-Vanberschot (2010*)*

The "explanations" and "cause and effect" that Parrish and Linder-Vanberschot refer to here are unclear. The question appears related to the dichotomous "analytical" vs. "holistic" perception styles that Nisbett (2003) and Miyamoto, Nisbett, and Masuda (2006) attribute to Western vs. Asian thinkers, but it seems unlikely that students with no formal training in the area would be self-aware enough to characterize their own preferences at this level of abstraction.

Beckman-Brito (2003) designed a similar questionnaire, but she approached it quite differently. Her questions, unlike Parrish and Linder-Vanberschot's (2010), are derived from consultations with international students rather than prior literature in the field, giving them an emic (insider's) aspect. The items on her survey are also relatively concrete and specific to the classroom context, such as ranking the acceptability of using a professor's first name in class from 1 (acceptable) to 5 (unacceptable), which makes them much easier to interpret, particularly for NNSs of the survey language (English). Beckman-Brito did administer her survey to a pilot group of international students, but each nationality was only represented by a single respondent. The response variance could therefore be attributable to a number of individual differences other than nationality.

Although researchers have experimented with different approaches for differentiating learners by culture, ranging from the abstract (Joy & Kolb, 2009; Parrish & Linder- Vanberschot, 2010) to the concrete (Beckman-Brito, 2000), a comprehensive framework for comparing

cultures of learning across countries has not yet been developed and widely operationalized. This gap in the field, combined with the appeal of etic studies for comparing many cultures simultaneously and conveniently, has led some researchers in intercultural pedagogy to look to other areas of academia, such as anthropology and intercultural management, for frameworks of culture that can be borrowed or adapted for pedagogical purposes.

Etic Frameworks of General Culture Study

As Hofstede, Hofstede, and Minkov (2010) summarize, "In the first half of the twentieth century, social anthropology developed the conviction that all societies, modern or traditional, face the same basic problems; only the answers differ" (p. 29). This conviction led some scholars to codify these basic problems into systematic frameworks in order to contrast societies' methods for dealing with them. Inkeles and Levinson (1954) developed one such system to analyze world cultures based on their opinions on the character of (1) Relation to Authority, (2) Conception of Self, and (3) Conflict Resolution Style. Social anthropologists Kluckhorn and Strodtbeck (1961), with the Harvard Values Project, published another influential framework around the same time, which consisted of: (1) Human Nature, (2) Man-Nature Relationship, (3) Time Sense, (4) Activity, and (5) Social Relations (Gallagher, 2001). Researchers such as Naroll (1970), and Driver (1983) modified these lists, but the resulting frameworks remained closely related. One important common aspect of these frameworks is that they were developed conceptually, or with a top-down approach. Developing the frameworks top-down means that they were applied to cultures without a priori evidence that the constructs being studied actually existed within each culture. This is a weakness that often applies to etic studies, an approach through which cultures can only be "understood based on one's [own] unavoidable preconceptions" (Hu, 2013, p. 3). When researchers from any culture create a new cultural

framework, the nature of that framework will tend to reflect the nature of the culture(s) that produced it. As Minkov (2013) argues, ethnocentrism should certainly be minimized, but "...there is no culture-free social science just as there is no absolutely unbiased journalism" (p. 17).

With his book *Culture 's Consequences,* Hofstede (1980) attempted to mitigate this shortcoming by developing a framework for comparing cultures based on representative survey responses instead of theoretical categories. Hofstede was not the first to develop an etic framework for comparing global cultural values, but he was the first to do so based on empirical data instead of anthropological theory, a methodological innovation that has propelled his framework to far greater prominence than any earlier model. Hofstede's study still represented a predominantly etic approach, as the survey items themselves were developed by Western European researchers and reflected their distinct view of culture and the world, but still, "...all subsequent research in the area has been based on a Hofstedean approach to studying culture" (Taras & Steel, 2009, p. 1).

Hofstede began by comparing a data set of 160-item questionnaires filled out by ~88,000 IBM employees in 71 countries, then eliminating responses from any country represented by fewer than 50 participants, retaining 40 respondent countries (Hofstede, 2001). The data had been collected in two waves: one in 1967 and one in 1972. Hofstede then organized the responses by respondent nationality and analyzed them using exploratory factor analysis, a statistical process in which the "relationships between observed variables and latent (unobservable) factors are examined in an attempt to find a parsimonious explanation of the pattern of relationships among variables" (Sawaki, 2013, p. 2073). Hofstede concluded that his questionnaire items tended to produce responses in four clusters, indicating four latent factors

displaying significant variance between countries. Looking at the survey items that fell into each cluster, Hofstede labelled the factors *Power Distance, Masculinity/Femininity, Individualism/Collectivism,* and *Uncertainty Avoidance.* These are not a priori elements of cultural theory that Hofstede took into his research, but ex post-facto analyses of what the factors of his generalized values survey seemed to represent. There have been 6 major replication of Hofstede's (1980) study, each of which successfully replicated at least three of the four cultural dimensions.

One interesting aspect of Hofstede's method of creating dimensions of culture inductively, with survey data, rather than deductively, with anthropological theory, is that they do not offer a complete view of cultural differences; they merely represent differences that have been discovered. This means that if other differences are discovered, they can be appended to Hofstede's framework. This happened for the first time in 1985. Concerned that prior frameworks of culture were Euro-centric and did not adequately represent East Asian values, researcher Michael Bond and his research group, the Chinese Culture Connection created, a "Chinese Value Survey" (CVS) that was then administered to 2,300 students in 23 countries around the world (Hofstede, Hofstede, and Minkov, 2010). 20 of these countries overlapped with countries in Hofstede's IBM survey, and the results were compared to determine that all of Bond's dimensions correlated very strongly with Hofstede's, save one: "long term orientation." Hofstede and Bond (1984) decided to add the dimension to Hofstede' s framework.

Shortly after Hofstede's (1980) original study was published, a group of European academics led by Inglehart began to coordinate a massive, ongoing survey project called the World Values Survey (WVS) that presently includes 400,000 respondents in nearly 100

countries, none of which are represented by fewer than 1,000 respondents (What we do, 2015). WVS data is freely available online for download by researchers and data analysts, among the most prominent of whom are Inglehart and Baker (2000). Another such analyst was Minkov (2007), who analyzed the WVS data in an attempt to derive a new values framework; however, all dimensions he produced correlated strongly with Hofstede's existing dimensions except one: "indulgence vs. restraint." He then joined Hofstede's research team for the most recent edition of Hofstede, Hofstede, and Minkov (2010), which formally adds this sixth dimension to the Hofstede framework.

Although Hofstede's model is still commonly used today, it is no longer the only major framework of its kind. Several have been developed explicitly to improve upon the Hofstede model (e.g. Bond, 1988; Schwartz, 1994; House et al., 2004), while others have utilized the Hofstede framework to examine adjacent phenomena (e.g. Smith, Trompenaars, & Dugan 1995; Minkov, 2007), and others have been developed independently of the Hofstede framework (e.g. Inglehart & Baker, 2000; Schimmack, Oishi, & Diener, 2002). Among these, the World Values Survey (discussed above) and the GLOBE study (House et. al, 2004) are the most influential. While the WVS was developed independently, the GLOBE project was developed specifically to enhance Hofstede's framework, citing methodological concerns with the original. It used a survey developed by 170 researchers from various cultural backgrounds and given to 17,370 respondents in 61 countries to develop a set of nine dimensions that recycle some of Hofstede's terminology but do not correlate strongly with his dimensions. Both of these projects are valid resources for general culture study, but previously published use of them for investigating cultures of learning is minimal. Since Hofstede' s model is the one most embraced by researchers of cultures of learning, it is the framework most appropriate for the focus of the present study.

Studying Cultures of Learning with the Hofstede Framework

Although the Hofstede model was developed to improve management practice, Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010) make numerous suggestions about how the framework feasibly could be used to understand classroom behavior. In general, Hofstede (2013a) suggests that pedagogical trainers can, "...develop teaching tools using the tables of differences between societies scoring high and low on each dimension" (p. 3). More specifically, Hofstede, Hofstede, and Minkov (2010) connect the original four dimensions explicitly to classroom tendencies, such as the suggestion that for students in collectivist cultures, "the social acceptance that comes with the diploma is more important than the individual self-respect that comes with mastering a subject" (p. 119). Based on claims such as this one, Hofstede's model, "has been used widely for exploring aspects of culture in educational settings" (Signorini, Weisemes, & Murphy, 2009, p. 253). Statements such as these hold great appeal for writers who want to help teachers with intercultural or cross-cultural classrooms to better understand what their students value and expect. Since ESL/EFL classrooms are inherently cross-cultural places, the appeal of Hofstede's work to avoid this sort of faux pas has been especially pronounced in the pedagogical literature of ESL/EFL.

ESL/EFL teachers and researchers' use of this model has typically occurred in one of three ways. First, some authors use Hofstede's framework to organize theoretical discussions on the differing needs of cross-cultural classrooms (e.g. Nguyen, Terlouw, & Pilot, 2006; Yamazaki, 2005; Spencer-Oatey, 1997). Second, other teachers/researchers apply Hofstede's body of work to qualitative studies, hoping to mine his existing data for new classroom implications (e.g. Cronjé, 2011; Tananuraksakul, 2013). Third, some researchers use Hofstede's dimensions to inform new quantitative projects, typically as a basis for

formulating survey questions intended to differentiate response groups on a cultural basis (e.g. Richardson & Smith, 2007; Parrish & Linder-Vanberschot, 2010; Li & Guo, 2012). To understand in more depth how these teachers use the framework, it is necessary to examine each dimension of the Hofstede framework.

Power distance. Power distance can be defined as, "...the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede, Hofstede, and Minkov, 2010, p. 61). In a high power distance culture, the power dynamic of "role pairs" such as boss-employee, parent-child, and teacher-student tend to be authoritarian, with the powerful member seen as an unquestionable expert; in a low power distance culture, the role pairs are more egalitarian, and input from the subordinate is expected and encouraged. Country scores on Hofstede's power distance index have been found to correlate significantly with national-level behaviors such as corruption of public officials ($r = 0.83$) (Taras, Kirkman, and Steel, 2010) and frequency of voluntary blood donations per thousand inhabitants of a country ($r = -0.77$) (Hofstede, Hofstede, and Mikov, 2010).

Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010) also make numerous suggestions about how this dimension may manifest in the classroom. For example, Hofstede (1986) states that in a high power distance classroom, "students expect [the] teacher to outline paths to follow," whereas students in low power distance classrooms expect more say in the process (p. 313). Hofstede, Hofstede, and Minkov (2010) suggests that the reason teachers are addressed as, "guru" in India and Indonesia is that the power distance in those countries requires the use of titles (p. 69); Tananuraksakul (2013) makes a similar statement about power distance manifesting in Thailand by teachers being called "Khun-Krue" or "Ajarn" (p. 105).

Furthermore, Hofstede, Hofstede, and Minkov (2010) state that:

> In the small-power-distance situation, teachers are supposed to treat the students as basic equals and expect to be treated as equals by the students ... younger teachers are more equal and are therefore usually more liked than older ones. (p. 69)

Hofstede (1986) also suggests that students in large power distance societies, "the teacher is never contradicted nor publicly criticized" (p. 313). Nguyen et al. (2009, p. 5) corroborate this interpretation, relaying an anecdote in which a Vietnamese teacher became deeply offended when a student pointed out a mistake that the teacher had made in class as an example of power distance manifesting in the classroom.

Researchers have also used their own understanding of this dimension to produce interesting findings related to classroom culture. Li and Guo (2012), for instance, analyzed whether Chinese teachers of English would tend to exhibit behavior associated with a lower power distance than Chinese teachers of other subjects, as perceived by their students. The researchers administered a Likert-style agree/disagree survey to the students in 26 classrooms in China, 14 of which were English classrooms and 12 of which were not, offering a total of 1,179 student participants. All classrooms were taught by different teachers. Power distance survey items were based on statements made by Hofstede (1980; 1986; 2005) about the connections between his power distance dimension and the classroom behavior of students and teachers. Examples agree/disagree survey items include: “Your teacher is approachable,” and “Your teacher is authoritarian,” (p. 238). An ANOVA test revealed that the department of the teacher (English or Other) had a highly significant effect of the perceived power distance of that teacher.

Individualism vs. collectivism. As Hofstede, Hofstede, and Minkov (2010) summarize, “Individualism pertains to societies in which the ties between individuals are loose... Collectivism as its opposite pertains to societies in which individuals from birth onwards are

integrated into strong, cohesive in-groups..." (p. 92). Whereas individualist cultures tend to normalize acting for one's own interest over the interests of those around us, collectivist cultures tend to normalize prioritizing the needs of those around us above one's own. As Taras, Kirkman, and Steel (2010) note, "individualism- collectivism has received the bulk of attention from cross-cultural researchers" thus far (p. 2).

Individualism tends to correlate strongly with national wealth and other indices of international development (Schimmack, Oishi, and Diener, 2005, p. 29). However, it does not correlate significantly with economic growth, meaning that if the relationship between wealth and individualism is causal, it is more likely that wealth fosters individualism, and not vice versa (Hofstede, 2010, p. 132). According to a meta-analysis of 598 empirical studies by Taras, Kirkman, and Steel (2010), "at the country level of analysis, individualism had the strongest positive associations with innovation ($p = 0.65$), wealth ($p = 0.70$), life satisfaction ($p = 0.64$), and income equality ($p = 0.64$)" (p. 24). Kashima & Kashima (1998) also found that it correlates negatively with I-dropping, meaning that collectivist cultures tend to allow leaving the subject out of a sentence phrased in the first person ($r = -0.75$ across sixty countries and $r = -0.64$ across thirty languages). Note that there is considerable conceptual overlap between power distance and individualism vs. collectivism. As Hofstede (2010) states, "In the large-power-distance situation, children are expected to be obedient toward their parents. Sometimes there is even an order of authority among the children themselves, with younger children being expected to yield to older children. Independent behavior on the part of a child is not encouraged" (p. 67). This sounds very similar to the nature of role-pairs described according to the individualism/collectivism dimension, with children in collectivistic societies expected to behave more obediently. Individualism vs. collectivism and power distance also share a strong

statistical relationship (r = 0.68). However, when national wealth (GNI) is controlled for, the correlation between the two dimensions weakens to r = -0.36, so it still makes sense to treat the dimensions separately (Hofstede 2010, p. 486).

Individualism vs. collectivism has also received a great deal of attention with regards to classroom culture. It has been suggested that students from collectivist cultures, "may be more persistent in their efforts to achieve high educational results" (Faitar 2006), and they may be more likely to receive help from their parents on homework but be less autonomous (Tamis-LaMonda, et al. 2008). Oyserman and Lee (2008) suggest that a collectivist culture could manifest in the classroom as a hesitance to expose one's peers for cheating (p. 317), and Parrish and Linder-Vanberschot (2010) speculate that students from highly individualist cultures would be comfortable speaking in a whole-class environment and be motivated by individual gain such as praise or good grades; students from collectivist cultures are likely to prefer small-group conversations, to acquiesce to the teacher's perspective, and to be motivated by "the greater good" (p. 4). Taras, Steel, and Kirkman (2011) suggest that:

> Individualist cultures display a preference for equity rules in distribution of rewards and punishments; that is, those who contribute more are believed to deserve a greater reward. Collectivist cultures tend to favor equality rules and are much more comfortable with each member of the group receiving equal compensation regardless of individual effort or input. (p. 192)

So in more concrete terms, it's possible that in group work, students from individualist countries may prefer individual grades, whereas students from collectivist countries may prefer to be graded as a group. A tempting conclusion to jump to regarding this dimension is that students from collectivist cultures perform better on group work generally, whereas students from individualist cultures would perform better on solo work; however, this is a simplification of a complex topic. As Carson and Nelson (1994) observe:

> ...Writing groups [in the USA] often function in a way that is antithetical to the values of collectivist cultures. That is, writing groups as they are frequently implemented in composition classrooms in the U.S. function more often for the benefit of the individual writer than for the benefit of the group. (p. 22)

The authors explain that mutual benefit is not the same as collaboration; students from collectivist cultures *may* excel in collaborative environments, but in the example case of American writing groups, when students are often asked to exchange direct feedback on one another's work, individualist values may actually be more in play than collectivist ones. Students concerned with saving face and preserving harmony can hardly be expected to give the sort of face-to-face (i.e. confrontational) "constructive criticism" to their peers that has long been a cornerstone of American composition pedagogy.

Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010) make a number of clear statements of their own about how this dimension could manifest in the classroom. For example, Hofstede (1986, p. 313) suggests that classes in collectivist societies will divide into small, cohesive subgroups based on “particularist criteria,” such as ethnicity, whereas groups in individualist classrooms will form groups that "vary from one situation to another based on universalist criteria (e.g. the task at hand)." Hofstede, Hofstede, and Minkov (2010) suggest that, “In the collectivist classroom, the virtues of harmony and maintaining face reign supreme. Confrontations and conflicts should be avoided” (p. 118). They further suggest that in collectivist cultures, “opinions are predetermined by group membership” (p. 124); Parrish and Linder-Vanberschot (2010) add that individualist cultures promote expression of student opinion, whereas collectivist cultures expect students to “accommodate teacher's point of view,” (p.4). Finally, Hofstede, Hofstede, and Minkov (2010) suggest that, “In the collectivist culture... the social acceptance that comes with the diploma is more important than the individual self-respect that comes with mastering a subject” (p. 119).

Uncertainty avoidance. Hofstede, Hofstede, and Minkov (2010) suggest the following definition for uncertainty avoidance:

> Uncertainty avoidance can... be defined as the extent to which the members of a culture feel threatened by ambiguous or unknown situations. This feeling is, among other manifestations, expressed in nervous stress and in a need for written and unwritten rules. (p. 191)

The opposite of uncertainty avoidance has sometimes been called ambiguity tolerance by other writers. When the members of a culture are very uncertainty avoidant, they cannot tolerate ambiguity and place a high value on plans, schedules, and clear answers. In a culture with low uncertainty avoidance, ambiguity can be tolerated; vague plans and schedules are ok, a boss doesn't need to have a perfect answer to every question to be good at his/her job, etc. Another way to conceptualize this distinction is that cultures with a high uncertainty avoidance scale may believe in an absolute truth; in low uncertainty avoidance cultures, a relativistic stance will be the norm (Hofstede, Hofstede, & Minkov, 2010, p. 247). According to a 598-study meta-analysis by Taras, Kirkman, and Steel (2010), “Uncertainty avoidance [has] the strongest positive associations with neuroticism ($p = 0.59$) but the strongest negative associations with innovation ($p = -0.45$) and life satisfaction ($p = -0.49$)” (p. 25). Kashima and Kashima (1998) showed that in 52 countries, the national scores for uncertainty avoidance correlated with a formal/informal second person pronoun system at $r = 0.43$. In other words, in societies that avoid uncertainty, there is more likely to be a dichotomous linguistic mechanism such as *tu/vous* in French or *tu/usted* in Spanish to differentiate social roles. Hofstede specifies, though, that uncertainty avoidance is not the same as risk aversion; "Paradoxically, [people in uncertainty avoidant cultures] are often prepared to engage in risky behavior in order to reduce ambiguities, such as starting a fight with a potential opponent rather than sitting back and waiting" (Hofstede, Hofstede, & Minkov, 2010, p. 198).

Uncertainty avoidance has received little, if any, attention by classroom researchers. Hofstede (1986), though, suggests that students in high uncertainty avoidance countries prefer structured learning environments with clear objectives, clear instructions, strict deadlines, strict teachers, and teachers who are able to answer every question from students clearly and precisely (p. 314). He also suggests that teachers interpret disagreement as disloyalty, which is similar to the statement made about power distance (above).

Masculinity vs. femininity. Hofstede, Hofstede, and Minkov (2010) define the masculinity vs. femininity dimension as follows:

> A society is called masculine when emotional gender roles are clearly distinct—men are supposed to be assertive, tough and focused on material success, women are supposed to be more modest, tender and concerned with the quality of life. A society is called feminine when emotional gender roles overlap—both men and women are supposed to be modest, tender, and concerned with the quality of life. (p. 140)

Elsewhere, the same-authors state somewhat more clearly that, "Masculinity-femininity is about a stress on ego versus a stress on relationship with others, regardless of group ties" (Hofstede 2010, p. 146) Lamoreaux and Marling (2012) suggest, in their meta-analysis on the topic, that, "masculinity is coded by competition, autonomy, forcefulness, and dominance" (305). Hofstede's index for country masculinity scores correlates strongly ($r = 0.86$) with the WVS index for survival vs. well-being (Hofstede, 2001, p. 651), supporting this interpretation of the dimension. However, Taras, Kirkman, and Steel (2010, p. 25) performed a meta-analysis of 598 previous Hofstede studies and found a correlation of $r = -0.5$ between masculinity and gender role equality, supporting the element of gender bias in this dimension.

Hofstede, Hofstede, and Minkov (2010) state that in general, "Masculinity-femininity is about a stress on ego versus a stress on relationship with others, regardless of group ties" (p. 146), and although Parrish (2010) refers to the dimension as "Nurture vs. Challenge" orientation,

he describes a similar construct to Hofstede's masculinity and states that it is responsible for the degree of competition present in the classroom (p. 4). Hofstede, Hofstede, and Minkov (2010) elsewhere state that:

> Criteria for evaluating both teachers and students differ between masculine and feminine cultures. On the masculine side, teachers' brilliance and academic reputation and students' academic performance are the dominant factors. On the feminine side, teachers' friendliness and social skills and students' social adaptation play a bigger role. (p. 162)

A survey related to incorporating online elements into curricula by Thowfeek and Jaafar (2012) found that, "In a feminine culture ... accepting a new system will be influenced by others in the organization whereas in a masculine culture, decision of adopting a new system is influenced by rewards, recognition, training and improvement of the individuals" (p. 966). Hofstede, Hofstede, and Minkov (2010) connect this dimension explicitly to classroom norms in a number of ways. They state that, "Failing in school is a disaster in a masculine culture... [whereas] failure in school in a feminine culture is a relatively minor incident" (p. 161), that "...in the more feminine cultures, the average student is considered the norm, while in more masculine countries, the best students are the norm" (p. 160), and that in feminine cultures, weak students are praised, but in masculine cultures, only strong students are praised (p. 165). The researchers also state that, "In feminine countries, assertive behavior and attempts at excelling are easily ridiculed" (p. 160), and that in a masculine society, a student who fails an exam may request to try it again, which would not happen in a feminine country (p. 160).

Though he does not connect it explicitly to the masculinity dimension, Jin (2011) administers a story-completion task to Chinese preschoolers (n=93) and European American preschoolers (n=93) and confirms his hypothesis that:

> [European American] children would be more sensitive to the social cost of high achieving in that low achieving peers would express negativity toward high achieving peers. By contrast, Chinese children would not express such negativity but, instead, admiration and the desire to emulate high achievers. (p. 272)

Long-term orientation. Hofstede, Hofstede, and Minkov (2010) define long-term orientation as follows:

> Long term orientation stands for the fostering of virtues oriented toward future rewards- in particular, perseverance and thrift. Its opposite pole, short-term orientation, stands for the fostering of values related to the past and present-in particular, respect for tradition, preservation of "face," and fulfilling social obligations. (p. 239)

Following his work with Ng et al. (1982), which used a new global survey but produced a set of four dimensions of culture that all correlated very strongly with Hofstede' s existing dimensions, researcher Michael Bond wondered if developing survey items in a different cultural context could yield more unique results. He put together a group of researchers called the Chinese Culture Connection and developed a new instrument based on input from Chinese scholars. This time, the responses (n = 2,300 in 23 countries) reproduced several of Hofstede's existing dimensions but added one that Hofstede's framework could not account for. Hofstede and Bond (1988) validated this new dimension by correlating it with rate of national economic growth (r = 0.64 for period of 1965-1985; r = .70 for period of 1985-1995) and labeled it long-term orientation.

The long-term orientation dimension has been examined little by other researchers. This may be partly because it represents “an amalgamation of different cultural traits” whose conceptual ties are loose and difficult to operationalize (Maleki and de Jong, 214, p. 120). It's worth noting that this dimension was originally labeled “Confucian Dynamism” (Hofstede, Hofstede, & Minkov, 2010, p. 497). However, Hofstede preferred to re-label this dimension in accordance with the values that it seemed to represent, rather than its historical

origin, so that it would be a better fit with the other dimension titles (Hofstede, Hofstede, & Minkov, 2010, p. 497).

Explicit analysis of this construct in the classroom has also been limited. Discussion of the influence of Confucianism in the classroom, however, has been more common, so it is worth over-viewing briefly, even though it is not an identical construct to the one described by Hofstede and Bond (1988). For example, Chan (1999) suggests that:

> Confucianism encourages the Chinese to respect hierarchical relationships between individuals so that the teachers are expected to teach as well as guide students. Many would feel that ineffective teaching is taking place if they are continually asked in class to express their opinions or to solve a problem by themselves. (p. 301)

Chan (1999) also connects Confucianism to a preference for rote learning, a connection that Hofstede, Hofstede, and Minkov (2010) also make. However, this claim is contested by other researchers (e.g. Ryan, 2013). A similar contestation arises in the connection between learners in Confucian-Heritage Cultures (CHCs) with group learning. Nguyen et al. (2006) cite numerous studies to support their claim that, "Learners from CHC contexts prefer working in groups and perform better in groups" (p. 4). However, Agelasto (1998) argues that Chinese and Korean learners are too competitive to enjoy group work and therefore prefer to work independently.

Although they do not connect it explicitly to the classroom, Hofstede, Hofstede, and Minkov (2010) state that members of long term-oriented cultures specialize in "synthetic" thinking, whereas members of short term-oriented cultures specialize in "analytical" thinking (p. 251), a division they connect to the Platonic conception of truth vs. the Confucian conception of relativity (pp. 247-9), and one which draws a close parallel to the notion of holistic vs. analytic thinking styles put forth by Nisbett (2003) and by Miyamoto, Nisbett, and Masuda (2006) and discussed above in connection with Parrish and Linder-Vanberschot (2010).

Indulgence vs. restraint. Hofstede, Hofstede, and Minkov (2010) suggest that:

> Indulgence stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. Its opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms. (p. 281)

This dimension arose following Minkov's (2007) investigation of WVS data, which produced a set of three dimensions of culture, two of which correlated strongly with existing Hofstede dimensions, and one of which—indulgence vs. restraint—did not. Hofstede, Hofstede, and Minkov (2010) validated the new dimension primarily with international measures of subjective well-being. For example, U.S. researchers Schimmack, Oishi, and Diener (2002) asked 6,780 college students from 36 countries how often they had experienced pleasant and unpleasant emotions in the previous month; the reported mean frequency of pleasant emotions is positively correlated with indulgence ($r = 0.49$) (p. 709). In the WVS data from 1995-2004, the national percentages of respondents who described their health as "very good" correlate with Hofstede's indulgence dimension at $r = 0.67$ (Hofstede, Hofstede, and Minkov, 2010, p. 503). Hofstede, Hofstede, and Minkov (2010) also point to correlations between this dimension with UN data on police officers per 100,000 inhabitants ($r = -0.42$) (p. 296) and WHO data on national prevalence of obesity ($r = 0.39$) (p. 292).

However, perhaps due to its relatively recent adoption, little has been written about this dimension by other researchers. Furthermore, unlike Hofstede's (1980) original older dimensions, this newer one is not explicitly connected to the classroom by Hofstede (1986, 2001) or by Hofstede, Hofstede, and Minkov (2010). This means that there aren't yet any controversies in the literature regarding this dimension that need to be resolved for teachers.

Criticism of the Hofstede model and its applications. The Hofstede model and its ubiquity in culture studies have received substantial criticism. Some criticism relates to the

Hofstede framework itself, and some identifies problems associated with its widespread use. Much of it reiterates familiar arguments that have already been addressed by Hofstede (1980), Hofstede, Hofstede, and Minkov (2010), or by various secondary researchers—Litrell (2012) calls this a case of "academic amnesia," in which writers continually run around a few tracks of criticism without having familiarized themselves with the full conversation surrounding Hofstede' s work. For instance, some authors point to Hofstede's apparent equivocation of countries with cultures as problematic (e.g. Baskerville, 2003; Signorini, Weisemes, & Murphy, 2009). Particularly in the case of post-colonial societies, such as many countries in Africa and in Southeast Asia, political boundaries set up for the convenience of the colonists seldom reflect the complex cultural realities of a given region, in which religious, ethnic, and other forces of culture may bind several countries together by one criterion but split a single country up by another criterion. Hofstede, Hofstede, and Minkov (2010) concede to this criticism, but respond that, "Using nationality as a criterion is a matter of expediency, because it is immensely easier to obtain data for nations than for organic homogeneous societies" (p. 21). Furthermore, expediency aside, there is no evidence that any other criterion that's useful for differentiating all cultures on earth (e.g. ethnic heritage, religion, political parties, level of education) would create cleaner divisions, as each of these criteria overlap one another fluidly. Hofstede, Hofstede, and Minkov (2010) go on to argue that:

> Within nations that have existed for some time there are strong forces toward further integration: (usually) one dominant national language, common mass media, a national education system, a national army, a national political system, national representation in sports events with a strong symbolic and emotional appeal, a national market for certain skills, products, and services. (p. 21)

So while the use of national borders to delineate cultures is not ideal, it's not totally misguided, either. Minkov, (2013) goes on to summarize that:

> There is no one best unit of analysis in cross-cultural research, yet the most influential modem studies were carried out at the national level... From a practical perspective, what matters is not whether these groups have shared cultures that distinguish them from other groups but whether the statistical indicators we have about them allow us to make some important predictions. (p. 25).

Since Hofstede's model (and others formulated at the national level of analysis) show strong relationships with various external criteria around the world, it is a useful model, despite the fact that nations and cultures are not theoretically equivalent.

Many researchers also draw issue with particular applications of Hofstede's framework. As Taras and Steel (2009) point out, "Hofstede's original, decades-old indices, derived using data from the IBM study of 1967-73, are still frequently used in secondary empirical analyses, even in the most recent years" (p. 3). This trend has led some researchers to question whether Hofstede's original data can still accurately represent cultural trend in modem societies (e.g. Leung et al., 2005; Taras & Steel, 2009). Hofstede, Hofstede, and Minkov (2010) contest this criticism from a mostly theoretical standpoint, arguing that cultural values, unlike culturally motivated behaviors, remain stable across generations; "National value systems should be considered given facts, as hard as a country's geographical position or its weather" (p. 20). The most straight-forward approach to testing this hypothesis empirically would be to administer Hofstede's instrument to a new population that closely mirror the ones he originally administered the instrument to and compare the results. However, matching new samples to the older ones would be very challenging from a demographic standpoint, and as Beugelsdijk, Maseland, and van Hoorn (2015) point out, it would be prohibitively expensive for independent academics to attempt. Controlling for occupation, in particular, was easy for Hofstede, who was working for IBM at the time; doing so without the sponsorship of such a huge corporation would be impractical. Due

to this challenge, many researchers have taken indirect approaches for testing the temporal stability of Hofstede's findings.

For instance, Barkema and Vermeulen (1997) use Hofstede's (1980; 1991) country scores to examine whether aggregate national differences in Hofstede scores, referred to as "cultural distance" indices, would have a significant relationship with the survival of 828 Dutch foreign ventures in 72 countries from 1966-1996. The research question was whether smaller cultural distances between the Netherlands and various host countries would result in better survival of the Dutch ventures across decades. The researchers found that not only did a Euclidian measure of cultural distance have a significant relationship to the survival of ventures in any given time period, the interaction effect between the dates of foreign ventures was insignificant. This indicates that Hofstede's country scores (most of which represent data collected from 1967- 1973) were as useful in predicting the survival of Dutch foreign ventures in 1996 as they were in predicting the survival of Dutch foreign ventures in 1966. Barkema and Vermeulen (1997) and Hofstede, Hofstede, and Minkov (2010) cite these findings as indication that cultural values—as measured by the Hofstede model—are stable over time.

More recently, Beugelsdijk, Maseland, and van Hoorn (2015) used data from the World Values Survey (WVS) to replicate four of Hofstede's dimensions with successful loadings of 0.75-1 on each dimension (Long term orientation loads at a strength of 1 because it was originally derived from WVS data, not Hofstede's original questionnaire). The researchers then separated the WVS respondents into two cohorts, one born from 1902-1958 (mean= 1941) and one born after 1958 (mean=1971) and compare scores on the replicated Hofstede dimensions. The authors found that while actual national scores on the dimensions have shifted slightly, they

have done so in concert; “The scores on Hofstede's dimensions seem to have changed, but in lockstep... Hence, widespread values change notwithstanding, the relative positions of and differences between countries are remarkably stable” (p. 237). Beugelsdijk, Maseland, and van Hoorn (2015) cite this as evidence that Hofstede’s data and original country rankings are not obsolete. However, since the researchers separated the WVS data by respondent age, rather than by collection period (1980 vs. 2008), their results are predicated on the assumption that older individuals reflect the cultures they were raised in rather than the ones they live in presently.

Critics of the Hofstede model also find easy ammunition in the outright misuses of Hofstede's data that are occasionally published. In his editorial response to one such problematic study, Hofstede (2013b) laments that, “My hesitation about uncontrolled use of the instrument has never disappeared ... Sometimes erroneous conclusions based on naive uses of one of the versions of my instrument even pass the filter of peer-reviewed journals” (p. 5). The example that prompted Hofstede's (2013b) complaint was Fischer and Al-Issa (2013), who used Hofstede's VSM (1994) to compare new scores directly to the ones Hofstede published in 1980, despite the facts that they were employing a different survey than Hofstede originally did and that their respondents were not matched to Hofstede's original respondents.

Tung and Verbeke (2010) caution broadly that the Hofstede framework has become so common that researchers sometimes take its efficacy for granted and fail to question their results as much as they should. They refer to the “asymmetry of distance” between cultures as an example of one of the less well-known pitfalls, stating that:

> For example, Selmer, Chiu, and Shenkar (2007) found that it was much easier for 38 German expatriates to adjust comfortably in the United States than for 25 American expatriates in Germany, suggesting a substantial asymmetry in distance experienced by the two countries’ actors. (p. 1263)

Basic scores on the Hofstede scores therefore offer too little information for making complex predictions about cultural interactions; Hofstede's indices may convey useful and usable information, but the differences between cultures remain more complex than a simple report card could ever indicate. Tung and Verbeke (2010) also note that 53% of published studies based on Hofstede's work employ fewer than 10 comparison countries, despite Hofstede's (2013a) clear guidelines that the instrument loses accuracy when fewer than 10 countries are compared, as findings are relative, not absolute, and comparing just a few countries can be misleading.

The Research Situation of the Present Study

Many writers on cultures of learning make use of Hofstede's framework to organize their discussions. However, authors such as Signorini, Weisemes, and Murphy (2009) have pointed to this usage as problematic; the claims that Hofstede makes about using his framework to inform pedagogy rely on anecdotes, speculation, and studies that predate his own work, most of which are qualitative and only tangentially relevant (e.g. Cox & Cooper, 1977). The empirical veracity of Hofstede's claims needs to be established so that studies of cultures of learning which make legitimate use of his framework can be differentiated from those that make illegitimate use of his framework. Although such claims don't yet exist for long-term orientation and indulgence vs. restraint, investigating the relationships of these dimensions to cultures of learning now could still potentially avoid future confusion. To address these needs, the research questions of the present study are as follow:

1a) Do national scores on Hofstede's first four dimensions correlate with national scores on new survey items related to cultures of learning in the ways that claims made by Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010) anticipate?

1b) Do national scores on Hofstede' s two more recent dimensions correlate with scores on new survey items related to cultures of learning?

2) If Research Questions la and 1b are answered negatively, can Hofstede's dimensions be replicated with the present population and then correlated with scores on new survey items related to cultures of learning?

3) Can a Principal Components Analysis of survey data on items related to cultures of learning be used to create a specialized dimensions model for understanding cultures of learning?

Method

Participants

The participants in this study included 625 students from 8 countries (see Table 2). The eight participant countries in this study, while culturally distinct, do not constitute a sufficiently large array to be considered a truly "global" comparison. Franke and Richey (2010) performed a meta-analysis of cross-cultural studies in international business (Hofstede and various Hofstede replications included) and concluded that a sample of 7-10 countries is probably sufficient in cross-cultural analyses that show strong trends, but Hofstede (2013a) recommends using at least ten countries in replication studies that make use of his instrument.

Table 2
Participant demographics

	USA	South Africa	China	Turkey	Russia	Finland	Vietnam	France
Participants	181	103	64	60	59	58	52	48
Sex	58% f	72% f	80% f	55% f	80% f	81% f	81% f	42% f
	41% m	17% m	19% m	40% m	17% m	14% m	17% m	54% m
	0% o	0% o	0% o	0% o	2% o	2% o	0% o	2% o

Data collection

The data for this study was collected by emailing a brief, personalized cover letter and request for assistance to professors (n=247) in 20 countries around the world. The cover letter outlined the method and goal of the study and the specifications of the survey. About a third (n=77) of the professors contacted responded that they were willing to help, though 12 of these responded that they were not working directly with students at present and would offer connections to other professors who were. When professors responded positively, they received a link to the survey that could be distributed to students and a reminder that respondents should be undergraduates and should have studied English to at least a "high intermediate" level. The full data collected included 891 responses in 14 countries.

Of these, 625 responses were retained. The others were excluded for two reasons. First, some responses (n=54) were collected in countries that ultimately did not produce large enough sample sizes to be included in the study; these responses were discarded. Although Hofstede (2013a) suggests that 20 participants per country is a sufficient sample size for a cross-cultural analysis, Minkov (2013) points out that 50 has more often been used as the minimum sample size for cross-cultural survey research. For that reason, data was typically only retained in countries (n=8) that provided 50 full responses or more. France was an exception (n=48). The countries retained for analysis included the USA (n=181), South Africa (n=103), China (n=64), Turkey (n=60), Russia (n=59), Finland (n=58), Vietnam (n=52), and France (n=48).

Second, many responses had to be discarded because they were incomplete. I deleted these surveys listwise, deeming any survey that had fewer that 90% of the content questions filled out to be incomplete. This threshold proved relevant in very few cases—212 responses were deleted listwise (a mean of 26.5 deleted responses per retained country), but each deleted survey showing an average of just 14.5 completed content questions, indicating that most of them were abandoned only about halfway through the second content page. The retained surveys had a mean of less than one item missing per survey; these missing items were deleted pairwise from the analysis, i.e. excluded from the calculation of national mean scores for each item.

Design of Survey

As Smith (2003) notes, "Though response effects are a source of measurement error in all surveys, cross-national surveys are especially vulnerable to various error components being correlated with country" (p. 80). Harzing (2006) adds that, "...the studies we conduct might simply reflect differences in the way people respond to surveys, rather than picking up real

differences in management phenomena across countries" (p. 243). To avoid such misconstrual in the present study, a review of salient issues in cross-cultural survey design is indispensable.

He and van de Vijver (2012) organize the effects of culture on survey findings into the groups of bias and equivalence; "Bias refers to nuisance factors that jeopardize the validity of instruments applied in different cultures. Equivalence refers to the level of comparability of scores across cultures" (p. 3). Various ways to simply correct for bias and equivalence post-hoc do exist; however, an issue with these correction methods is that "...the researcher could well throw out the baby with the bath water" (Tellis and Chandrasekaran, 2010, p. 335). For instance, if participants in one country tend to select extreme response options, correcting for that tendency could eliminate legitimate findings that come not from a meaningless cultural response bias but from a cultural tendency toward passionate opinions. Minkov (2013) cites Jahoda (2011) in suggesting that "attempts at arriving at a universal, culture-free psychology are incoherent," as culture informs our psychology and cannot be extricated from it (p. 108). Some authors therefore suggest that, "Rather than trying to eliminate response bias retrospectively through standardization, researchers could attempt to avoid it by careful questionnaire design" (Harzing, 2006, p. 260). By mitigating response biases, the need for potentially counter-productive data correction can be avoided. Some of the most common response biases that can be avoided by careful survey design are Socially Desirable Reporting, Acquiescence Bias, Disaquiescence Bias, Middle Response Bias, and Extreme Response Bias. Socially desirable responding is "...the tendency of the respondent to present a desirable image of self to others" (Tellis and Chandrasekaran, 2010, p. 331). In present circumstances, this could mean that asking students how often they do something such as skip class or take good notes, the student responses might reflect the options they see as socially

desirable rather than the ones that reflect the truth. Tellis and Chandrasekaran (2010) recommend that, “The simplest techniques to reduce socially desirable responding are to ensure respondent anonymity and indirect questioning,” (p. 331). The present survey is therefore anonymous, and by phrasing questions to ask about “most students,” rather than “you,” on topics deemed socially sensitive by the researcher and pilot groups (discussed below), it is indirect when relevant.

Acquiescence Response Style (ARS) and Disaquiescence Response Style (DRS), also called “yea-saying” and “nay-saying” (Krosnick &Presser, 2010; Tellis & Chandrasekaran, 2010), refer to a respondent’s tendency to agree or disagree with a statement regardless of the statement's content. Studies such as Smith (2004), Harzing (2006), and Tellis and Chandrasekaran (2010) have demonstrated that ARS and DRS can vary systematically across cultures. A viable way to avoid these biases is to formulate questions and response scales as bipolar preferences, rather than asking respondents to endorse a given statement (Harzing et al., 2009; Krosnick & Presser, 2010). By asking respondents objectively which of two options they prefer, their ability to acquiesce to the researcher's point of view is ideally removed. Harzing et al. (2009) recommend this technique with the note of caution that items perceived as opposites in one culture may not always be perceived as equally opposite in other cultures (p. 420). This issue can be avoided by phrasing bipolar questions to offer options rather than opposites. For instance, rather than asking, “How blue or red should a coat be?” (1=very blue, 3=purple, 5=very red) which presently non-oppositional response choices as if they were opposites, one can ask, “Do you prefer red coats or blue coats?” (1=strongly prefer red, 3=no preference, 5=strongly prefer blue). In this way, the same question can be asked without the issue of cross-cultural equivalence that Harzing (2009) warns about.

Middle Response Style (MRS) and Extreme Response Style (ERS) refer to a respondent's tendency to either select only values close to the center of a response scale or at the extremities of a response scale (Harzing, Köster, & Zhao, 2012). Smith (2004), Harzing (2006), and Tellis and Chandrasekaran (2010) have demonstrated that MRS and ERS vary systematically across cultures. One way to mitigate MRS and ERS issues is to increase the number of points on response scales (Hui and Triandis, 1989; Harzing et al., 2009; Weijters et al., 2010). The present survey offers six response options per question for this consideration.

MRS has also been found by Harzing (2006) to correlate positively with the use of English-language questionnaires with NNS respondents, an effect that increases as proficiency in English decreases (p. 257). Harzing (2006) suggests that language effect differences may occur as a result of "cultural accommodation," a process by which language learners internalize aspects of the culture behind the language they are studying and reproduce those aspects of culture when they utilize the language (p. 249). If cultural accommodation is indeed to blame for differences in response styles when NNS respondents fill out questionnaires in English, then the use of English surveys for determining the learning preferences of learners in ESL classrooms might actually benefit from stimulating that cultural accommodation, assuming that the change in response style is accompanied by a parallel change in behavior. In other words, since the aim of the present study is to develop a tool for use in English language classrooms, it is appropriate to replicate the language priming effect that may be experienced by teachers in EFL classrooms.

Finally, Harzing, Reich, and Pudelko (2013) suggest that the MRS associated with distributing English-language surveys to NNS respondents could have to do with

respondent confidence in the language—if they lack confidence, they may be more likely to select noncommittal options. A way that researchers can force their hand in this case is to remove the middle point and use even numbers of response options. Dörnyei and Taguchi (2010) endorse this option for the purpose of reducing culturally-related MRS (p. 28), though they do not mention it in relation to survey language specifically. For that reason, the present survey uses an even number of response options. Language proficiency in itself was not controlled for in this study, as scales of language proficiency are not globally standardized—students in one country may understand a term such as "intermediate" very differently than students in another, and some students may be humbler in their self-assessments than others. Participating professors were simply requested to only distribute the survey to students of a "high intermediate" level or better, and the survey was written in learner-appropriate English, as discussed in the next section.

Description of survey.

The instrument for this study is a 77-item online questionnaire consisting of 2 instructional example questions, a 23-item adapted version of Hofstede's (2013) Values Survey Module (VSM), 44 new questions related to preferences and behaviors in the classroom, 7 demographic questions, and one open form for optional feedback. To ensure good survey comprehensibility, the survey was checked using the Flesch-Kincaid scale (grade 6.3, level 61.7) as well as the Compleat Lexical Tutor "Classic" test for lexical frequency, which indicated that 87.19% of the words in the survey are among the 1,000 most common in English, 95.65% are among the 2,000 most common, and 99.17 are among the 3,000 most common. Note that some words that showed up as "off list" (i.e. not even in the 25,000 most common words in English)

intuitively seem very common in the academic context, such as classmates, classroom, classwork, feedback, homework, and restroom.

The length of this survey was informed by Dörnyei and Taguchi's (2010) anecdotal suggestion that “most researchers agree” on a length limit of 4-6 pages and an average completion time of 30 minutes (p. 12). A pilot population of 24 international students (age=21.2, sex =68% female, nationality= 40% Bulgarian, 20% Chinese, 10% Libyan, 10% Saudi, 30% no reply) was conducted for this purpose and showed a median completion time of 18 minutes. The full respondent population for this survey showed a median completion time of 12 minutes for native speakers of English and 18 minutes for non-native speakers. The suggestion to minimize the number of pages involved was disregarded, as the questions on the present survey lent themselves to seven groupings by content and answer option. Krosnick and Presser (2010) suggest that grouping questions this way can reduce the cognitive demand that the survey places on respondents. Given that this survey does have a high number of pages (eleven, including one informed consent page, one instruction page, seven content pages, one demographics page, and one thank you page), the content pages were randomized, leaving the informed content and instructions pages first and the demographics and thank you pages last (as suggested by Krosnick and Presser, 2010), but shuffling all other pages for each respondent. This helped ensure that the later pages could not exhibit a disproportionate fatigue effect. The items on the content pages were grouped according to the following schema:

1+2) “How Important 1” + "How Important 2." These two pages could have been combined conceptually into one, but it would have been long, at 18 total questions. These pages included questions such as, "How important is it for your school work to be interesting?"

3) “How acceptable?” This page included questions such as, "How acceptable is it for a student to skip a class session because they are sick?"
4) “Most students...” This page included questions such as, "Are many students afraid to openly disagree with their professor?"
5) “Long Answer.” This page included questions that tended to have longer responses options than any other questions on the survey, such as, "In language class, do most students prefer to become good at the language or to get a good grade?"
6) “Misc. Unipolar.” This page included questions that did not fit into other content categories and were formulated with unipolar response options, such as, "How strict are the best professors?"
7) “Misc. Bipolar.” This page included questions that did not fit into other content categories and were formulated with bipolar response options, such as, “Do you prefer to do school work alone or in a group?”

Content of questions.

These questions were developed for several distinct purposes—to provide instructional examples for the test takers, to adapt Hofstede's VSM (2013c) for ELL student participants, to test Hofstede's claims about culture in the classroom, and to test his later two dimensions (long term vs. short term orientation and indulgence vs. restraint) for usefulness in predicting variations in cultures of learning as well. A table of specifications detailing which questions were developed for which purpose can be seen in Appendix A.

The survey begins with an informed consent form that includes contact information for the researcher and for the Institutional Review Board of the researcher's home university. It is followed by a page containing clear instructions for the survey and two sample questions, one in

unipolar formulation ("How important is it to you to drink coffee in the morning?") and one in bipolar formulation ("Do you prefer tea or coffee?") to give participants a clear idea of what they were being asked to do on this survey, as is recommended by Dörnyei and Taguchi (2010). The full survey can be seen in Appendix B.

The process of adapting the items from Hofstede's VSM, of which 23 of 24 were retained for the current study, consisted of rephrasing each item as a complete question, simplifying the language to make it appropriate for language learners, and adjusting them to refer specifically to the classroom context whenever possible. For an example, Hofstede's (2013c) item #21 reads: "One can be a good manager without having a precise answer to every question that a subordinate may raise about his or her work," (agree or disagree) (p. 4). This question was simplified and adjusted into item #56 for the new survey: "Does a good professor need to have a specific answer to every single question that students ask?"

To answer Research Question 1a, concerning the veracity of Hofstede's claims about culture in the classroom for his four original (1980) dimensions, the process involved taking clear, specific, and measurable claims and converting them into questions as directly as possible. For instance, Hofstede's (1986) suggestion that in large power distance societies, "the teacher is never contradicted nor publicly criticized" (p. 313) was converted into item #26: "How acceptable is it for a student to correct the professor when the professor has made a mistake?" To answer Research Question 1b, concerning the usefulness of Hofstede's newer dimensions (LTO and IVR) in predicting global variations in classroom culture, it was necessary to derive survey items from somewhat more general claims. An example is the association that Hofstede, Hofstede, and Minkov (2010) make between indulgence vs. restraint and the need to find a balance between personal pleasure/convenience and societal norms, which

was used to create item #17: “How acceptable is it for a student to arrive a little late to class?” Note that this question does not investigate punctuality per se, the way that a question such as, “how important is punctuality to you?” would (Minkov, 2013, p. 41). This more abstract definition would better encapsulate punctuality as a national value, but, as Minkov argues, “The problem with any abstract theoretical definition of a subjective construct, not specifying how the construct should be measured, is that it can create confusion with other constructs,” (p. 41). So providing greater specificity in this case will enable a less generalizable finding, but greater utility for classroom teachers.

Conversely, it was decided not to place a specific value on lateness, such as “how acceptable is it for a student to arrive to class 3 minutes late?” as Beckman-Brito (2000) did. Some teachers/schools have specific policies regarding tardiness, which could interfere with students' interpretation of the specific value given, whether it was 3 minutes, 5 minutes, 7 minutes, etc., creating a polarization that would not exist if another arbitrary value were chosen instead. Many of Hofstede's (2013c) original questions are ambiguous (e.g. “are you a happy person?”), so retaining some room for interpretation by the respondent does not seem to contradict the spirit of Hofstede’s methodology. I have tried to prioritize usefulness for teachers over other considerations in the design of these items while retaining a balance between the abstract and the concrete.

The demographic questions in this survey (age, sex, year in school, area of study, nationality, country of residence, and name of institution) are included to facilitate respondent matching between countries, as demographic inconsistencies could have moderating effects on the data.

Validation of survey items.

Given that face validity is a problematic notion for cross-cultural values studies (Minkov, 2013), the items used in this survey were validated by ensuring close derivations from Hofstede's claims and investigating good cross-cultural equivalence. Cross-cultural equivalence was addressed by consulting a multicultural panel of MA students in an American EFL/ESL Teaching program (3 from the USA, 2 from Libya, 1 from Japan, 1 from Argentina, 1 from Niger, 1 from Taiwan). The objective of this process was to collectively adjust the wordings of question and response-option and eliminate any phrasings that could be unique to my own home culture (American). He and van de Vijver (2012) refer to this process as "cultural decentering" (p. 9). It would have been ideal to contact professionals for this purpose, but this convenience sample still provided a considerable amount of feedback. The most significant finding of this process was that question #23 from Hofstede's VSM (2013c), which asked about the desirability of an employee having two supervisors, was not meaningful to students and did not have an immediate analog in the classroom context. The piloted replacement question, “should a class taught by two instructors be avoided?” was determined by the panel to be similarly incomprehensible from a student's frame of reference. Other adjustments were numerous but minor. One was the addition of a warning in the survey instructions page that "professor," which is used differently in different cultures, will be used in this survey to refer to all university-level teachers, whether they are technically called instructors, lecturers, professors, or something else. Another was the addition of the term “W.C.” to item #18, which asks about the acceptability of students leaving class to use the restroom, as it was discovered that the words restroom and bathroom were not sufficiently clear for ELLs of different backgrounds.

Analysis

To address Research Questions la and lb, the first step is to calculate national means for each survey item and then correlate those means with Hofstede, Hofstede, and Minkov Hofstede's (2010) previously published country indexes on the six Hofstede dimensions. Additionally, it will be important to determine whether the dimensions that he suggests are associated with each of these preferences and behaviors are actually the dimensions that correlate most strongly with them.

To address Research Question 2, it is necessary to determine whether a new replication of Hofstede's dimensions with the present population will better predict national mean scores on these items. This can be achieved by inserting the new national mean scores on each of the questions adapted from Hofstede's VSM (2013c) into the score equations provided by his VSM Manual (2013a). However, before making use of these scores, it's also crucial to calculate the internal reliability of each of these dimensions to ensure that Hofstede's items elicit coherent dimensions from the present population. This can be done by calculating Cronbach's alpha for each set of questions adapted from Hofstede's VSM (2013c). Hofstede indicates that such a calculation should produce an alpha of at least 0.7 to be considered a reliably replicated dimension (20l3a).

Finally, to address Research Question 3, a new principal components analysis (PCA) of the full survey data should be performed in order to determine whether or not Hofstede's model is the best one for predicting national mean scores on these items.

Results and Discussion

Research Questions 1a and 1b

RQ 1a) Do national scores on Hofstede's first four dimensions correlate with national scores on new survey items related to cultures of learning in the ways that claims made by Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010) anticipate?

RQ 1b) Do national scores on Hofstede' s two more recent dimensions correlate with scores on new survey items related to cultures of learning?

With a threshold for a strong correlation set conservatively at $r = 0.7$, the results indicate that national mean scores on the new questions do not tend to correlate strongly with the Hofstede indexes in accordance with the suggestions by Hofstede (1986) and Hofstede, Hofstede, and Minkov (2010). Of the 44 questions derived from Hofstede's claims, only two of them correlated at $r \geq 0.7$ on the intended dimension, both with masculinity vs. femininity (questions #24 and #25). Hofstede's previously published figures of my eight participant countries (Appendix D) correlated with the new data for these items at $r = -0.93$ for item #24 and $r = -0.71$ for item #25, confirming the claim that, “Failing in school is a disaster in a masculine culture... [whereas] failure in school in a feminine culture is a relatively minor incident,” (Hofstede, Hofstede, and Minkov, 2010, p. 161). These items each also had significant correlations ($r \geq 0.3$) with previously published uncertainty avoidance scores, at $r = 0.53$ for item #24 and $r = 0.43$ for item #25.

Surprisingly, items #41 and #42 also correlated strongly with the intended Hofstede dimension, but they had opposite the expected polarity. Item #41 (“If you get a question wrong in class, is it better for the professor to tell you the answer directly or to help you find the answer on your own?”) was expected to correlate positively with power distance, in

accordance with the suggestion that in a high power distance classroom, "students expect [the] teacher to outline paths to follow," whereas students in low power distance classrooms expect more say in the process (Hofstede 1986, p. 313). Instead, this item correlated with power distance at $r = 0.79$, indicating that students in higher power distance countries were actually more likely to report wanting help in finding the answers for themselves than students in lower power distance countries were. Scores on this item also correlated significantly with individualism ($r = -0.40$) and indulgence ($r = -0.74$). Question #42 ("In language class, do most students prefer to become good at the language or to get a good grade?") exhibited a similar issue. It was intended to probe the suggestion that, "In the collectivist culture... The social acceptance that comes with the diploma is more important than the individual self-respect that comes with mastering a subject," (p. 119). If this association were true, we would expect scores on question #42 to correlate negatively with individualism vs. collectivism, indicating that students in more individualist countries would tend to prefer subject mastery over good grades. Instead, scores on this item correlated positively with this dimension at $r = 0.81$, indicating that students in individualist countries were more likely to prefer good grades over language proficiency than students in collectivist countries were. Scores on this item also correlated significantly with power distance ($r = -0.34$), uncertainty avoidance ($r = -0.31$), and indulgence ($r = 0.61$).

Scores on all other items correlated on their intended dimensions with respective magnitudes of $r < 0.7$, and generally with similar correlations on other dimensions, indicating that the intended dimension did not share a strong relationship with how students responded to that question. For anybody wishing to make use of them, the national mean scores and standard deviations for all items can be found in Appendix C, the full set of Hofstede indices for

participant countries can be seen in Appendix D, and the full set of national mean correlations with those indices can be seen in Appendix E.

In summary, this study does not find support for the use of Hofstede' s statements about how his dimensions framework relates to preferences and behavioral norms in the classroom to make nation-level generalizations about these same phenomena in English-medium university classrooms. It therefore answers Research Questions 1a and 1b negatively and lends some degree of credibility to the complaints levelled by Signorini, Weisemes, and Murphy (2009) that the validity of Hofstede's work for use in the classroom context should not be taken for granted.

However, this failure to correlate strongly may have occurred for several reasons unrelated to the veracity of Hofstede's claims. First, it's possible that too few countries were included in this study to give an accurate portrayal of the global usefulness of Hofstede's work in this context. However, given that Hofstede only recommends using at least ten countries, and the eight used here found strong correlations between just 2 of the 67 questions (including the 23 adapted from Hofstede's own instrument) and the intended dimension, and between just 7 of 67 questions and any of his dimensions at all, it seems unlikely that the addition of data from two more countries would be sufficient to greatly affect these findings. It's also possible that students' self-report data on these items doesn't match their actual behavior, a criticism raised by researchers such as Northrup (1997). However, this criticism would apply to Hofstede's work as well, as it is also based on self-report data.

Research Question 2

2) If Research Questions la and 1b are answered negatively, can Hofstede's dimensions be replicated with the present population and then correlated with scores on new survey items related to cultures of learning?

Since 23 Hofstede's 24 original VSM (2013c) questions were included in this survey (item #23 was discarded after piloting, as discussed above), national mean scores on those items can be used to attempt to replicate Hofstede's dimensions. However, when performed, a test of reliability on the replicated dimensions (Cronbach's alpha, SPSS v. 23 for Mac) indicated that these items do not form reliable dimension with the present population, as shown in table 3, below.

Table 3
Reliability Data for Replicated Hofstede Dimensions

Dimension	Cronbach's α
PD	-0.311
IDV	0.453
UAI	-0.246
MAS	-1.516
LTO	-3.008
IVR	0.423

Hofstede (2013a) suggests that a reliability score of $\alpha \geq 0.7$ can be considered successful. For the individualism vs. collectivism dimension, the reliability was just $\alpha = 0.453$, indicating an unsuccessful replication. For the indulgence vs. restrain dimension, the reliability was $\alpha = 0.423$, indicating another unsuccessful replication. For all of the other dimensions, the reliability test actually produced negative (impossible) values, indicating strongly that the items could not be used to form a coherent dimension together with the present population. This failure to replicate the intended dimensions precluded the use of them to calculate new country scores on said dimensions.

This issue of impossible α values occurred because the items within these dimensions that had correlated together in one direction with Hofstede's population correlated with the present population in the opposite direction, indicating that these items did not reveal the same latent cultural construct within the present population as they had within Hofstede's. For the dimension of long term vs. short term orientation, for example, the present survey includes two pairs of questions adapted from Hofstede's VSM that are expected to correlate negatively at $r \leq -0.7$. Instead, the pairs correlate positively at $r = 0.72$ (items #11 and #12) and $r = 0.69$ (items #52 and #55). While a high score on question #11 ("How important is it to help out your family and friends when they need something?") should indicate short-term orientation, a high score on question #12 ("How important is it for you to be careful with money and not spend more than you need to?") should indicate long-term orientation. As the two items to correlate positively within the present sample at $r = 0.72$, their relationship appears to be incongruous with the construct that Hofstede uses these items to indicate in his sample.

With only eight countries in the present study, it's very possible that the dimensions which replicated weakly within these countries (individualism vs. collectivism, $r = 0.45$; indulgence vs. restraint, $r = 0.42$) could replicate somewhat more strongly if additional countries were added to the data set. However, it's less likely that this could occur with the dimensions that produced negative (impossible) reliability scores.

Research Question 3

3) Can a Principal Components Analysis of survey data on items related to cultures of learning be used to create a specialized dimensions model for understanding cultures of learning?

Next, a PCA of the total response data (in national means for all items) was performed in order to determine whether a superior factor model exists for explaining the current findings. PCA is a variable reduction technique very similar to Factor Analysis (FA), the technique that Hofstede (1980) employed. However, whereas FA produces clusters of variables ("factors") that sometimes correlate with one another, in order to allow the hypothesis of underlying latent constructs, PCA produces clusters of variables ("components") with very low inter-correlations and strong internal reliability in order to simplify data (Suhr, 2005). The methods are closely related, but given that the number of respondents and participant countries is low in the present study, PCA appears to be the more conservative method to employ.

Hofstede (2013a) recommends using at least ten countries to replicate his dimensions. Minkov (2013) suggests more conservatively that a study using factor analysis or principle components analysis on samples from at least 20 countries can be considered "major." Franke and Richey (2010), on the other hand, perform a meta-analysis of prior International Business research on 123 variables (6 of which are Hofstede's dimensions) studied in 3-227 countries and determine that studies indicating strong trends ($r \geq 0.5$) "may support credible international generalizations" if they utilize data from at least 7-10 countries. So although the present use of eight cases is fewer than ideal, it is not without some support, and according to the guidelines set by Franke and Richey (2010), strong trends in the present data are worth examining. My principal components analysis (Varimax rotation) of the full set of country mean scores on all items produces seven dimensions with Eigenvalues greater than 1, a common threshold for PCA (Brown, 2001) and the default setting for PCA in SPSS for Mac v. 23. These results can be viewed in Table 3:

Table 3
Eigen Values for Survey Principal Components Analysis

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %
1	19.190	28.642	28.642	16.737	24.981	24.981
2	17.518	26.147	54.789	15.911	23 .747	48.728
3	9.667	14.429	69.218	10.139	15.133	63.861
4	7.798	11.639	80.857	6.599	. 9.849	73.711
5	6.127	9.145	90.003	6.353	9.482	83.193
6	3.831	5.719	95.721	5.643	8.423	91.615
7	2.867	4.279	100.000	5.618	8.385	100.000

When reduced to their strongest items, these components have the following reliability values (Table 4):

Table 4
Reliability and Constituent Items of New Factors of Classroom Culture

Factors (in order of variance explained)	Items (in order of loading strength)	Reliability of Factors
1	39, 28, 3, 6	$\alpha = 0.97$
2	14, 25, 62, 9, 69	$\alpha = 0.90$
3	35, 31, 8, 52	$\alpha = 0.84$
4	53, 66	$\alpha = 0.93$
5	38, 22, 51	$\alpha = 0.93$
6	57, 58	$\alpha = 0.90$
7	36, 46, 65, 47	$\alpha = 0.98$

Thus, Research Question 3 is answered positively. The full results of this analysis can be seen in Appendix F. Although the PCA produces seven significant dimensions, dimensions #4 and #6 contain only two items that do not correlate strongly ($r \geq 0.7$) with any other survey items. Dimensions #5 and #7 contain three items and four items, respectively, but they do not correlate strongly ($r \geq 0.7$) with any other survey items either. This means that teachers are probably better served by looking at national differences in the specific items that constitute those dimensions than studying the dimensions themselves. The remaining three dimensions (#1, #2, and #3) have more

significant explanatory power, as they also correlate strongly with other items from the data set. National scores on these dimensions for the present data set correlate with one another at about r = .1, indicating highly independent dimensions.

The first dimension (α = 0.97) comprises the following items, reproduced below without response options for the sake of brevity (Table 5):

Table 5
Survey Items in Dimension 1

Item #	Question	Loading Strength in PCA of full survey data set
39	Is it better for students try to believe what their professors believe or to try to form their own opinions?	0.959
28	How acceptable is it for a student to ask the professor to change the class plan in a way that helps everybody, such as a few extra days for everybody to finish a paper?	0.957
03	How important is it for your school work to be interesting?	0.910
63	Is it more important for class to be fun or interesting?	0.908

Hofstede calculates his dimension scores by multiplying the item means by coefficients of his choice and then adding a constant (also of his choice) to them with the goal of scaling the global range of scores on each dimension to approximately 0-100. This makes them easier to understand, though it also means that if new countries are added that score below 0 or above 100, the researcher will have to decide whether to amend the old equation to rescale the data and then retroactively adjust all countries' scores or not. Applying the same method to this dimension, I arrived at the formula of score = (∑ item means) * 15 - 220. This produces the following national scores for my sample:

Finland: 98
Russia: 90
South Africa: 81
France: 80
Vietnam: 71
USA: 63
China: 49
Turkey: 15

These scores correlate strongly with scores on the following survey items (Table 6):

Table 6
Additional Survey Items that Correlate with Dimension I

Item #	Question	Correlation
27	How acceptable is it for a student to offer personal comments and opinions during class?	r = 0.86
40	What is better, for a professor to follow a careful plan in class or for professor to change class depending on what students need?	r = 0.84
19	How acceptable is it for a student to skip a class session because they sick?	r = 0.84
26	How acceptable is it for a student to correct the professor when the professor has made a mistake?	r = 0.80
11	How important is it to help out your family and friends when they need something?	r = 0.80
45	Do many students compete with each other in class?	r = -0.79
68	For most issues, is there only one correct opinion or are there many correct opinions?	r = 0.72
44	Do many students think language learning is stressful?	r = -0.72

Hofstede named his dimensions by examining the conceptual commonalities of the items included and attempting to gather them under a title. Doing the same, I have called this first dimension "Intellectual Autonomy." This title seems apt because a group that scores highly on it will tend to prioritize independent thought over agreement with the professor, to value interesting work, to find it acceptable to offer personal opinions in class, to correct a professor who has made a mistake, to believe that class is not competitive and there are many correct opinions on most issues, and to feel that language learning is not stressful. The only extraneous item is #11, which indicates that groups who score highly will tend to find it important to help out family and friends when they need something.

The second dimension (α = 0.902) includes the following survey items (Table 7):

Table 7
Survey Items in Dimension 2

Item #	Question	Loading Strength in PCA of full survey data set
14	Imagine your perfect job. How important would it be for you to have chances to be promoted?	0.921
25	How acceptable is it for a student to fail a course? *(inverse scored)*	-0.880
62	Is more important to like a professor or to respect a professor?	0.874
09	How important is it for your college major (area of study) to be respected by your family and friends?	0.851
69	How strict or relaxed should a professor be? *(inverse scored)*	-0.828

National scores on this dimension, when calculated using the formula score = (∑ item means) * l0 - 150, are as follow:

South Africa: 79
USA: 63
Vietnam: 52
China: 34
Russia: 45
France: 35
Turkey: 27
Finland: 12

These scores correlate strongly with scores on the following survey items (Table 8):

Table 8
Additional Survey Items that Correlate with Dimension 2

Item #	Question	Correlation
21	How acceptable is it for a student to address the Professor by a name and a title? (For example: "Professor Smith")	r = 0.97
29	How acceptable is it for a student to ask the professor to change the class plan in a way that helps only that student, such as a few extra days for that student to finish a paper?	r = 0.78
10	How important is it for your college major (area of study) to get you a stable job?	r = 0.76
24	How acceptable is it for a student to fail an assignment in class?	r = -0.83
12	How important is it for you to be careful with money and not spend more than you need to?	r = 0.77
17	How acceptable is it for a student to arrive a little late to class?	r = -0.71
48	Do many students find it embarrassing to respond "I don't know" to a question from the professor?	r = 0.70

Examining these items, I have called this dimension “Achievement Motivation.” Groups that score highly on this dimension tend to find it important to find a job with opportunities for promotion, to pursue area of study that is respected by family and friends and offers good job prospects, to prefer respectable professors to likable ones, to prefer strict professors to relaxed ones, to find it acceptable to ask a professor for special help, to value punctuality and thrift, to be embarrassed to admit that they don't know something in class, and to find it highly unacceptable to fail an assignment or a course. These items together seem to indicate a high or low focus on personal achievement.

The third dimension ($\alpha = 0.842$) comprises the following items (Table 9):

Table 9
Survey Items in Dimension 3

Item #	Question	Loading strength in PCA of full survey data set
35	Is it better for students to choose their own groups in class or for the professor to assign them?	0.902
31	How acceptable is it for a student to eat something during class?	0.818
08	How important is it to get noticed when you do good work? *(inverse scored)*	-0.802
52	How proud are you to be a citizen of your country?	0.744

National scores on this dimension, calculated according to the formula score = (∑ item means) * l5 - 150, are as follow:

USA: 87
Finland: 67
China: 59
South Africa: 55
Turkey: 41
France: 34
Vietnam: 29
Russia: 7

These scores correlate strongly with scores on the following survey items (Table 10):

Table 10
Additional Survey Items that Correlate with Dimension 3

Item #	Question	Correlation
64	Who is more responsible for making learning happen in the classroom: the student or the professor?	r = -0.78
55	Is hard work the most reliable way to get good results?	r = 0.69[1]

The conceptual commonality of the items comprising this dimension is less definite than those of the previous two dimensions. I have labelled it "Behavioral Autonomy," though I think that this is an imperfect title. It specifically does not seem to align with the

[1] Note: This value is below the $r \geq 0.7$ threshold set earlier. However, given the considerations that this dimension has less explanatory power than the others, the threshold of 0.7 is arbitrary, and item #55 is interesting, I felt it worth including in this table.

finding that a group of students who scores highly on this dimensions will tend be proud of their countries and tend to prefer that a professor selects student work groups. However, it does align with that group's apathy for praise, the opinion that eating in class is ok, the feeling that the student is more responsible for learning in the classroom than the professor is, and the belief that hard work is the surest way to get good results.

Implications

The broad implications of this study are that:

1) Hofstede's published scores may not be useful for predicting values and behavioral norms in modern, English-medium university classrooms,
2) Hofstede's dimensions may not be replicable with modern, English-speaking university students, and
3) There may be a superior model for systematizing and predicting the way that national culture influences cultures of learning around the world.

Many teachers and researchers have used Hofstede's work to inform their cross-cultural pedagogy. Some, such as Li and Guo (2012) have found compelling and statistically significant results through their interpretation of how Hofstede's model relates to the classroom. However, the results of the present study suggest that using Hofstede's work in this fashion may not always be warranted. Teachers who incorporate elements of Hofstede's framework into their pedagogy without testing its applicability to their specific teaching situation may risk wasting their energy or making cultural missteps. However, this study does indicate that classroom values and behaviors around the world vary systematically and that they can be meaningfully analyzed at the national level using PCA. While the number of countries involved in this study are too few to suggest that the new dimensions of classroom culture discussed above are globally stable, the findings do suggest that further research in this area is warranted, and that a new dimensions framework based on response data from contemporary ESL/EFL students may better serve the needs of ESL/EFL teachers than Hofstede's framework does.

Since the present sample group is small, the findings of this study may best be applied when comparing specific participant countries. For example, for question #23, "How acceptable

is it for a student to address the professor by name only? (For example: 'John'),” students in South Africa had a mean response of 1.97, (SD=1.2), indicating a response between “Totally Unacceptable” (1) and “Somewhat Unacceptable” (2), whereas students in Finland had a mean response of 5.50 (SD = 0.98), indicating a response between “Somewhat Acceptable” (5) and “Totally Acceptable,” (6). On question #29, “How acceptable is it for a student to ask the professor to change the class plan in a way that helps only that student, such as a few extra days for that student to finish a paper?” students in South Africa had a mean response of 1.87, indicating a response between “Totally Unacceptable” (1) and “Somewhat Unacceptable” (2), whereas students in Finland had a mean response of 3.95, indicating a response between “Slightly Acceptable” (3) and “Somewhat Acceptable” (4). Observing differences in the data such as these can be useful in helping travelling teachers to anticipate their students' expectations and in thereby preventing travelling teachers from being caught off-guard by behavior that may be more normal in their host country than it had been in their home country.

Limitations and Future Research

The primary limitation of this study is of course the small number of participant countries (n = 8) and student participants per country (median = 60). According to the standards set by Minkov (2013), a cross-cultural study with at least 50 respondents per country in at least 20 countries can be considered "major;" Hofstede's original study also used 50 as the minimum sample size, though he suggests that replications can be done with as few as 20 (2013a). Getting more participants per country would allow the examination of demographic moderator variables such as gender, age, year of study, and area of study. While 64 participants in China may satisfy Minkov's (2013) and Hofstede's (2013a) criteria for a national sample, having only 12 males in that group makes a gender-based analysis highly unreliable. Such demographic issues are another major limitation of this study. Some demographic imbalances may be ok, if they are representative of the students who study ESL/EFL in each country, but this data set is not large enough to control for national representativeness.

Additionally, previous researchers have criticized the use of students as convenience samples generally; according to He and van de Vijver (2012):

> Many cross-cultural studies use college students, implicitly assuming that they constitute matching samples. However, this assumption may be invalid; for example, college education quality and enrolment rates in developed and developing countries differ significantly. (p. 6)

Harzing, Reich, and Pudelko (2013) elaborate that, “Especially in developing countries students might be different from the population as a whole and might be more westernised than non-students,” (p. 115). Since the degree to which college students are valid representatives of their national cultures may vary from country to country, it is important not to attempt to generalize the findings of this study to groups outside of the classroom, essentially falling victim to the same fallacy that teachers commit when they generalize Hofstede's work *into* their classrooms.

Finally, it's crucial to remember that nationality is just one level of cultural analysis and that culture is just one aspect of a person's identity. Using national-level data to stereotype individuals is unadvisable from both a pedagogical and a humanitarian perspective. This data should only ever be used as a first-step in preparing for actual classrooms, offering some general indications of cultural differences that the teacher is likely to encounter in their new country from a probabilistic standpoint; not from a deterministic one. There's no guarantee that national trends will be equally manifested in all classrooms (or even at all schools), so national-level data should be used to help teachers know where to begin focusing their attention and what differences to be generally aware of—not as an end-all profile of the culture of learning that they will encounter in a given country.

Future research should first focus on attempting to replicate the present findings by administering this same survey to at least 100 students per country in at least 20 countries and ensuring that those 20 countries represent as many distinct global cultural groups as possible; the numerical criterion alone is inadequate, as analyzing 20 countries with historically related cultures (such as 20 countries in Central and South America, 20 countries in East Asia, or 20 countries in sub-Saharan Africa) would still produce globally non-generalizable results. With a sample of greater size and diversity than the present one, findings regarding the utility of Hofstede's work in predicting classroom culture around the globe could be made more reliably, and it would also be possible to investigate the role of demographic moderator variables within each participant country. If the present findings regarding Hofstede's predictions are confirmed, then the larger data set could be used (via FA or PCA) to produce a more reliable set of cultural dimensions for systematizing the study of cultures of learning than the three hypothesized above.

Conclusion

In conclusion, this study has shown that research generalizing Hofstede's findings in the classroom may constitute a misuse of his work. It also indicates that Hofstede's speculation about how his dimensions affect cultures of learning requires further study, as these preliminary findings draw its reliability into question. If his work *can* be used to explain classroom culture, then the ways in which it can and cannot be used to do so should be worked out before researchers and writers in the area of cross-cultural pedagogy continue to use his work.

Given the small number of participant countries in this study (n=8), and given the small number of participants per country (median = 60) and the range of gender ratios found within those countries (42 - 81 % female), it would be unwise to take the three dimensions of cultures of learning suggested above as generalizable. However, they are a good preliminary indication that even if Hofstede' s work cannot be used to meaningfully and reliably predict global variation in cultures of learning, there may be latent constructs related to cultures of learning that can be discovered through PCA or FA and used in this way once more data is available.

Finally, this study has demonstrated on a basic level that variations in cultures of learning do vary significantly at the national level. Whether or not these differences can be systematized through a statistical analysis such as PCA, they can be studied by individual practitioners who wish to be better in touch with the needs and expectations of their students at home and abroad.

References

Abd-Kadir, J., & Hardman, F. (2011). Reforming teacher education in East Africa: The importance of socio-cultural context. In M. Cortazzi and L. Jin (Ed.) *Cultures of Learning: International Perspectives on Language Learning and Education* (pp. 80-94). New York, NY: Palgrave MacMillan.

Agelasto, M. (1998) *Educational disengagement: undermining academic quality at a Chinese university.* N.P.: M. Agelasto. Retrieved 15-Jan, 2016 from: http://www.agelastos.com/disengagement/

Akkermans, D., Harzing, A.-W., & van Witteloostuijn, A. (2010). Cultural Accommodation and Language Priming Competitive versus Cooperative Behavior in a Prisoner's Dilemma Game. *Management International Review,* 50, pp. 559-583.

Arabski, J., & Wojtaszek, A. (2011). *Aspects of culture in second language acquisition and foreign language learning.* Berlin, Germany: Springer Science & Business Media.

Arnold, M. (1869). *Culture and Anarchy.* Ed. Samuel Lipman (1994). New Haven: Yale UP.

Bacha, N., & Bahaus, R. (2013). Cultures of learning in academia: A Lebanese case study. In M. Cortazzi and L. Jin (Ed.) *Cultures of Learning: International Perspectives on Language Learning and Education* (pp. 116-135). New York, NY: Palgrave MacMillan.

Barkema, H., & Vermeulen, F. (1997). Stability of Hofstede over time. *Journal of International Business Studies,* 28, 845-864.

Beckman-Brito, K. (2000). Classroom etiquette: A cross-cultural study of classroom behaviors. *Arizona Working Papers in SLAT,* 10*,* 17-34.

Bennet, M. (2013). *Basic Concepts of Intercultural Communication.* Boston: Intercultural Press.

Beugelsdijk, S., Maseland, R., & van Hoorn, A, (2015). Are scores on Hofstede's dimensions of national cultures stable over time? A cohort analysis. *Global Strategy Journal,* 5, 223-240.

Bogdanowska-Jakubowska, E. (2011). Getting rid of the modesty stigma. In J. Arabski & A. Wojtaszek (Ed.) *Aspects of Culture in Second Language Acquisition and Foreign Language Learning* (pp. 167-181). Berlin, Germany: Springer.

Bond, M. (1988). Finding universal dimensions of individual variation in multicultural studies of values: The Rokeach and Chinese value surveys. *Journal of Personality and Social Psychology,* 55, 1009-1015.

Brown, J.D. (2001). What is an eigenvalue? *Shiken: JALT Testing & Evaluation SIG Newsletter,* 5, 15-19.

Carson, J., & Nelson, G. 1994. Writing Groups: Cross-Cultural Issues. *Journal of Second Language Writing,* 3, 17-30.

Chan, S. (1999). The Chinese learner - a question of style. *Education and Training,* 41, 294-304.

Charlesworth, Z. (2009). Cultures of Learning: The Missing Variable. *Reflecting Education,* 5, 52-65.

Chen, S.X., & Bond, M.H. (2010). Two languages, two personalities? Examining language effects on the expression of personality in a bilingual context. *Personality and Social Psychology Bulletin*, 36, 1514-1528.

Chita-Tegmark, M., Gravel, J., Serpa, M., Domings, Y., & Rose, D. (2012). Using the Universal Design for Learning Framework to support culturally diverse learners. *Journal of Education,* 192, 17-22.

Cortazzi, M., & Jin, L. (2013). *Cultures of Learning: International Perspectives on Language Learning and Education.* New York, NY: Palgrave MacMillan.

Cox, C. J., & Cooper, C. L. (1976). Developing organizational development skills in Japan and the UK: An experiential approach. *International Studies of Management & Organization,* 6, 72-84.

Cronjé, J. (2011). Using Hofstede's cultural dimensions to interpret cross-cultural blended teaching and learning. *Computer and Education,* 56, 596-603.

Doiz, D., Lasagabaster, D., and Sierra, J. (2013). Globalisation, internationalisation, multilingualism and linguistic strains in higher education. *Studies in Higher Education,* 38, 1407-1421.

Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration, and processing* (2nd Ed.). New York, NY: Routledge.

Faitar, G. (2006). Individualism versus collectivism in schools. *College Quarterly,* 9. Retrieved from: http://www.senecacollege.ca/quarterly/2006-vol09-num04-fall/faitar.html

Fischer, O., & Al-Issa, A. (2012). In for a surprise piloting the Arab version of the VSM94. *International Journal of Intercultural Relations,* 36, 737-742.

Franke, G.R., & Richey, R.G. (2010). Improving generalizations from multi-country comparisons in international business research. *Journal of International Business Studies,* 41, 1275-1293.

Gallagher, T. (2001). The value orientations method: A tool to help understand cultural differences. *Journal of Extension,* 39. Retrieved from http://www.joe.org/joe/2001december/ttl.php.

Graddol, D. (2006). *English Next: Why global English may mean the end of 'English as a foreign language.*' London, UK: The British Council.

Harzing, A.-W. (2006). Response styles in cross-national survey research: A 26-country study. *International Journal of Cross Cultural Management,* 6, 243-266.

Harzing, A.-W. (2010). How to address your teacher? Country differences in preferred ways of address for university teachers. *Harzing. com.* Retrieved from: http://www.harzing.com/teacher .htm.

Harzing, A.-W., Baldueza, J., Brner-Rasmussen, W., Barzantny, C., Canabal, A., Davila, A., Espejo, A., Ferreira, R., Giroud, A., Koester, K., Liang, Y.-K., Mockaitis, A., Morley, M., Myloni, B., Odusanya, J.O.T., O'Sullivan, S.L., Palaniappan, A.K., Prochno, P., Choudhury, S.R., Saka-Helmhout, A., Siengthai, S., Viswat, L., Soydas, A.U., & Zander, L. (2009). Rating versus ranking: What is the best way to reduce response and language bias in cross-national research? *International Business Review*, 18, 417-432.

Harzing, A.-W., Brown, M., Köster, K., & Zhao, S. (2012). Response style differences in cross-national research: Dispositional and situational determinants. *Management International Review,* 52, 341-363.

Harzing, A.-W., Reiche, B.S. & Pudelko, M. (2013). 'Challenges in international survey research: A review with illustrations and suggested solutions for best practice.' *European J International Management,* 7, 112-134.

He, J., & van de Vijver, F. (2012). Bias and Equivalence in Cross-Cultural Research. *Online Readings in Psychology and Culture,* 2, 1-19.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, California: Sage Publications.

Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of Intercultural Relations,* 10, 301-320.

Hofstede, G. (2013a). *Manual VSM 2013.* Retrieved from http://www.geerthofstede.nl/vsm2013

Hofstede, G. (2013b). Replicating and extending cross-national value studies: Rewards and pitfalls–An example from Middle East studies. *Insights,* 13, 5-7.

Hofstede, G. (2013c). *VSM 2013 English.* Retrieved from http://www.geerthofstede.nl/vsm2013

Hofstede, G., & Bond, M.H. (1984). "Hofstede's culture dimensions: An independent validation using Rokeach's Value Survey." *Journal of Cross-Cultural Psychology* 15, 417-33.

Hofstede, G., & Bond, M.H. (1988). "The Confucius connection: From cultural roots to economic growth." *Organizational Dynamics* 16, 4-21.

Hofstede, G., & Hofstede, G-J. (2001). *Culture's Consequences* (2nd Ed.). London, UK: Sage Books.

Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations: Software of the mind (2nd Ed.).* 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.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies.* Thousand Oaks, CA: Sage.

Hu, A. (2013). Intercultural learning. In C. Chapelle (Ed.) *The encyclopedia of applied linguistics* (pp. 2776-2783). Hoboken, NJ: Wiley-Blackwell.

Hui, C. H., & Triandis, H. C. (1989). Effects of Culture and Response Format on Extreme Response Style. *Journal of Cross-Cultural Psychology,* 20, 296-309.

Inglehart, R. (2008). Changing values among Western publics from 1970 to 2006. *West European Politics,* 31, 130-146.

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American sociological review,* 65, 19-51.

Inkeles, A., and D. J. Levinson (1969). "National character: The study of modal personality'and sociocultural systems." In G. Lindzey and E. Aronson (Eds.) *The Handbook of Social Psychology* (2nd Ed.), vol. 4. Reading, MA: Addison-Wesley [Original work published 1954].

Jahoda, G. (2011). Past and present of cross-cultural psychology. In F.J.R. van de Vijver, A. Chasiotis, & S.M. Breugelmans (Eds.), *Fundamental questions in cross-cultural psychology* (pp. 37- 63). New York, NY: Cambridge University Press.

Jin, L., & Cortazzi, M. (2006) 'Changing practices in Chinese Cultures. *Language, Culture and Curriculum,* 19, 5-20.

Jin, L. & Cortazzi, M. (2013). *Researching Intercultural Learning.* New York, NY: Palgrave MacMillan.

John, O.P. (1990). The Big Five factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L.A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66-100). New York, NY: Guilford.

Joy, S., & Kolb, D.A. (2009). Are there cultural differences in learning style? *International Journal of Intercultural Relations* 33, 69-85.

Kashima, E., & Kashima, Y. (1998). Culture and language: The case of cultural dimensions and personal pronoun use. *Journal of Cross-Cultural Psychology*, 29, 461-86.

Kluckhohn, F.R., & Strodtbeck, F.L. (1961). *Variations in Value Orientations.* Westport, CT: Greenwood.

Krosnick, J.A., & Presser, S. (2010). Question and questionnaire design. In P. Marsden & J. Wright (Eds.) *Handbook of survey research* (2nd Ed.), pp. 263-314. Bingley, U.K.: Emerald Publishing Group.

Kumar, I., & Parveen, S. (2013). Teacher education in the age of globalization. *Research Journal of Educational Sciences,* l, 8-12.

Lado, R. (1957). *Linguistics across cultures.* Ann Arbor, Michigan, USA: University of Michigan Press.

Lamoreaux, M., & Merling, B. (2012). Outside the head and outside individualism collectivism: Further meta-analyses of cultural products. *Journal of Cross-Cultural Psychology,* 43, 299-327.

Leung, K., Bhagat, R.S., Buchan, N.R., Erez, M., & Gibson, C.B. (2005). Culture and international business: Recent advances and their implications for future research. *Journal of International Business Studies,* 36, 357-378.

Levine, R. (1997). *A Geography of Time.* New York: Basic Books.

Lewis, M., Simons, G., and Fennig, C. (Eds.) (2015). Ethnologue: Languages of the World (18th Ed.). Dallas, Texas: SIL International. Retrieved from: http://www.ethnologue.com

Li, D., & Guo, X. (2012). A comparison of power distance of Chinese English teachers and Chinese non-English teachers in classroom communication. *Intercultural Communication Studies,* 21, 221-239.

Li, J. (2013). Cultural Models, Children's Beliefs, and Parental Socialization: European American and Chinese Learning. In M. Cortazzi and L. Jin (Ed.) *Cultures of Learning: International Perspectives on Language Learning and Education* (pp. 41-58). New York, NY: Palgrave MacMillan.

Li, X., & Cutting, J. (2011). Rote learning in Chinese culture: Reflecting active Confucian-based memory strategies. In L. Jin & M. Cortazzi (Eds.), *Researching Chinese learners: Skills, perceptions, and intercultural adaptations* (pp. 21-42). New York, NY: Palgrave MacMillan.

Litrell, R. (2012). Cultural Value Dimension Theories: Hofstede -A Work in Progress. *Insights,* 12, 3-6.

Macintyre, P. D., & Gardner, R. C. (1989). Anxiety and second-language learning: Toward a theoretical clarification. *Language Learning,* 39, 251-275.

Maleki, A., & de Jong, M. (2014). A proposal for clustering the dimensions of national culture.

Cross-Cultural Research, 48, 107-143.

Markee, (2013). Factor analysis. In C. Chapelle (Ed.) *The encyclopedia of applied linguistics* (pp. 1887-1890). Hoboken, NJ: Wiley-Blackwell.

Metcalf, L. E., Bird, A., Peterson, M. F., Shankarmahesh, M., & Lituchy, T. R. (2007). Cultural influences in negotiations: A four country comparative analysis, *International Journal of Cross Cultural Management,* 7, 147-68.

Migliore, L.A. (2011). Relation between Big Five personality traits and Hofstede's cultural dimensions: San1ples from the USA and India. *Cross-Cultural Management,* 18, 38-54.

Minkov, M. (2007). *What makes us different and similar: A new interpretation of the World Values Survey and other cross-cultural data.* Sofia: Klasika i Stil Publishing House.

Minkov, M. (2013). *Cross-cultural analysis: The science and art of comparing the world's modern societies and their cultures.* Thousand Oaks, CA: Sage Publications.

Murphy, E., Gordon, J., & Mullen, A. (2004). A preliminary study exploring the value changes taking place in the US since the September 11, 2001 terrorist attack on the World Trade Center in New York. *Journal of Business Ethics,* 50, 81-96.

Ng, S.H., Hossain A.B.M.A., Ball, P, Bond, M.H., Hayashi, K., Lim, S.P., O'driscoll, M.P., Sinha, D., & Yang, K.S. (1982). Human values in nine countries. *Diversity and unity in cross-cultural psychology* 17, 169-172.

Nguyen, P.M., Terlouw, C., & Pilot, A. (2006). Culturally appropriate pedagogy: the case of group learning in a Confucian Heritage Culture context. *lntercultural Education,* 17, 1- 19.

Nisbett, R.E. (2003). *The geography of thought: How Asians and westerners think differently... And why.* New York, NY: Free Press.

Nizegorodcew, A. (2011). Understanding culture through a lingua franca. In J. Arabski & A. Wojtaszek (Eds.) *Aspects of Culture in Second Language Acquisition and Foreign Language Learning* (pp. 7-20). Berlin: Springer.

Northrup, D. A. (1997). The problem of the self-report in survey research. Institute for Social Research, York University.

Olivas-Lujan, M.R., Harzing, A.-W., & McCoy, S. (2004). September 11, 2001: Two quasiexperiments on the influence of threats on cultural values and cosmopolitanism. *International Journal of Cross Cultural J\1anagement,* 4, 211-228.

Otwinowska-Kasztelanic, A. (2011). Do we need to teach culture and how much culture do we need? In J. Arabski & A. Wojtaszek (Ed.) *Aspects of Culture in Second Language Acquisition and Foreign Language Learning* (pp. 35-48). Berlin: Springer.

Oyserman, D., and Lee, S. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin,* 134, 311-342.

Oxford, R.L. (Ed.). (1996). *Language learning strategies around the world: Crosscultural perspectives.* Manoa, HI: University of Hawaii Press.

Palfreyman, D., & Smith, R. C. (2003). Learner autonomy across cultures: Language education perspectives. London, UK: Macmillan.

Parrish, M., & Linder-Vanberschot, J. (2010). Cultural dimensions of learning: Addressing the challenges of multicultural instruction. *The International Review of Research in Open and Distributed Learning,* 11, 1-10.

Richardson, R.M. & Smith, S.W. (2007). The influence of high/low-context culture and power distance on choice of communication media: Students' media choice to communicate with professors in Japan and America. *International Journal of Intercultural Relations,* 31, 479-501.

Ryan, J. (2013). Comparing learning characteristics in Chinese and Anglophone cultures: Pitfalls and insights. In M. Cortazzi and L. Jin (Eds.) *Cultures of Learning: International Perspectives on Language Learning and Education* (pp. 41-58). New York, NY: Palgrave MacMillan.

Sawaki, Y. (2013). Factor analysis. In C. Chapelle (Ed.) *The encyclopedia of applied linguistics* (pp. 2073-2077). Hoboken, NJ: Wiley-Blackwell.

Schimmack, U., Oishi, S., & Diener, E. (2002). "Cultural influences on the relation between pleasant emotions and unpleasant emotions: Asian dialectic philosophies or individualism-collectivism? " *Cognition and Emotion* 16, 705-19.

Schimmack, U., Oishi, S., & Diener, E. (2005). Individualism: A valid and important dimension of cultural differences between nations. *Personality and Social Psychology Review,* 9, 17-31.

Schwartz, S. H. (1994). *Beyond individualism/collectivism: New cultural dimensions of values.* Thousand Oaks, CA: Sage Publications, Inc.

Selmer, J., Chiu, R.K., & Shenkar, O. (2007). Cultural distance asymmetry in expatriate adjustment. *Cross Cultural Management: An International Journal* 14, 150-160.

Signorini, P., Weisemes, R., & Murphy, R. (2009). Developing alternative frameworks for exploring intercultural learning: a critique of Hofstede's cultural difference model. *Teaching in Higher Education,* 14, 253-264.

Smith, T. W. (2003). Developing comparable questions in cross-national surveys. In J. Harkness, F. J. R. van de Vijver, & P. Ph. Mohler (Eds.) *Cross-cultural survey methods* (pp. 69-92). Hoboken, NJ: Wiley.

Smith, P.B., Trompenaars, F., & Dugan, S. (1995). The Rotter locus of control scale in 43 countries: A test of cultural relativity. *International Journal of Psychology,* 30, 377-400.

Soledad, A.M. (2013). Does the reconstruction process improve a school? *Journal of Border Educational Research,* 2, 4-7.

Smith, P.B. (2004) 'Acquiescent response bias as an aspect of cultural communication style', *Journal of Cross-Cultural Psychology,* 35, 50-61.

Spencer-Oatey, H. (1997). Unequal relationships in high and low power distance societies: A comparative study of tutor-student role relations in Britain and China. *Journal of Cross-Cultural Psychology,* 28, 284-302.

Spencer-Oatey, H. (2012). What is culture? A compilation of quotations. *GlobalPAD Core Concepts.* Available at: http://www2.warwick.ac.uk/fac/soc/al/globalpad/openhouse/interculturalskills/global_pad_-_what_is_culture.pdf

Suhr, D. D. (2005). Principal component analysis vs. exploratory factor analysis. *SUGI 30 proceedings,* 203-230.

Tamis-LeMonda, C. et al. (2008). Parents' goals for children: The dynamic coexistence of individualism and collectivism in cultures and individuals. *Social Development,* 17, 183-209.

Tananuraksakul, N. (2013). Power distance reduction and positive reinforcement: EFL learners' confidence and linguistic identity. *International Journal of Language Studies,* 7, *103-116.*

Taras, V., Kirkman, B. L., & Steel, P. (2010). Examining the impact of culture's consequences: A three decade, multi-level, meta-analytic review of Hofstede's cultural value dimensions. *Journal of Applied Psychology,* 95, 405-439.

Taras, V., & Steel, P. (2009). Beyond Hofstede: Challenging the ten commandments of cross-cultural research. In C. Nakata (Ed.), *Beyond Hofstede: Culture frameworks for global marketing and management.* New York, NY: Palgrave MacMillan.

Tellis, G., & Chandrasekaran, D. (2010). Extent and impact of response biases in cross-national survey research. *International Journal of Research in Marketing,* 27, 329-341.

Thowfeek, M., & Jaafar, A. (2012). Instructors' views about implementation of e-learning system: An analysis based on Hofstede's cultural dimensions. *Social and Behavioral Sciences,* 65, 961-967.

Tung, R., & Verbeke, A. (2010). Beyond Hofstede and GLOBE: Improving the quality of cross-cultural research. *Journal of International Business Studies,* 41, 1259-1274.

Tylor, E. (1871). *Primitive Culture: Research into the development of mythology, philosophy. religion, art, and custom.* London. UK: John Murray.

Department of Education (2006). Building partnerships to help English language learners. Retrieved from http ://www2.ed.govInclb/methods/english/lepfactsheet. pdf

Wang, J., & Cortazzi, M. (2011). Changing cultural ways with praise: A distant action research project in China. In M. Cortazzi and L. Jin (Ed.) *Cultures of learning: International perspectives on language learning and education* (pp. 21-40). New York, NY: Palgrave MacMillan.

Weijters, B., Cabooter, E., & Schillewaert, N. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *International Journal of Research in Marketing,* 27, 236-247.

What we do (2015). *World Values Survey.* Retrieved from: http://www. worldvaluessurvey .org/WVSContents.j sp

Yuan, Y., and Xie, Q. (2011). Cultures of leaming: An evolving concept and an expanding field. In M. Cortazzi and L. Jin (Ed.) *Cultures of Learning: International Perspectives on Language Learning and Education* (pp. 21-40). New York, NY: Palgrave MacMillan.

Appendixes

Appendix A: Table of Specifications

Dimension	Adapted From Hofstede's VSM	From Hofstede's Statements About Classroom Culture	Based on Hofstede's General Statements about Culture (not about School Specifically)	Based on My Own Inferences
Power Distance	5, 6, 46	21, 22, 23, 26, 41, 51, 56		
Individualism	3, 4, 9, 10,	27, 34, 35, 36, 39, 42		
Uncertainty Avoidance	33, 53, 56, 57	40, 43, 44, 50, 54, 60, 64, 67, 69		
Masculinity	7, 8, 14, 16	24, 25, 28, 29, 37, 38, 45, 62, 65		
Long Term Orientation	11, 12, 52, 55	61	47, 48, 68	59
Indulgence	13, 15, 49, 58			17,18, 19, 20, 30, 31, 32, 63
Instructional Examples				1, 2
Demographic Questions				70, 71, 72, 73, 74, 75, 76
Feedback Form				77

Appendix B: Survey

*Note: The layout of the survey has been modified to fit this page.

Survey on Undergraduate Classroom

Thank You for Contributing to This

Hello,

My name is John Whalen, and I'm a researcher from Colorado State University. Thank you for agreeing to participate in this survey!

Your participation is anonymous and voluntary, so if you decide at any time that you want to stop, you can, and there won't be any penalty. The survey should take about 15-25 minutes to complete. By continuing to the next page, you indicate that you've read this page and consent to participate.

The purpose of this survey is to investigate what students prefer in their classrooms so that I can develop a tool to help train new teachers. Filling out this survey won't help you directly, but it will help a lot of teachers around the world.

There are no known risks of this study.

If you have any questions about the research, please contact John Whalen at John.Whalen@Colostate.Edu. If you have any questions about your rights as a volunteer in this research, please contact Colorado State University's Institutional Review Board at: RICRO_IRB@mail.colostate.edu; 970-

491-1553. Thanks again!

John Whalen
Colorado State University
John.Whalen@Colostate.Edu

Tatiana Nekrasova-Beker
Colorado State University
TNBecker@Mail.Colostate.Edu

[END OF PAGE]

There are two types of questions in this survey. Both types have six options for answers. The first type asks you to give your opinion about something, such as drinking coffee in the morning. Here is an example:

1. How important to you is drinking coffee in the morning?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

The second type of question asks about your preference between two items, such as coffee and tea. Here is an example:

* 2. Do you prefer coffee or tea?

Strongly prefer coffee	Moderately prefer coffee	Slightly prefer coffee	Slightly prefer tea	Moderately prefer tea	Strongly prefer tea
○	○	○	○	○	○

For each question, please choose the response that best matches your preference.

Note: This survey will use the term "professor" for all teachers at universities, including those who use titles such as "Assistant Professor," "Lecturer" or "Instructor" instead. When the survey asks about how a "professor" should be, it also means lecturers, instructors, and all other teachers in university classrooms.

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

How Important 1

These questions ask about how important things are to you.

3. How important is it for your school work to be interesting?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely import
○	○	○	○	○	○

4. How important is it for you to have enough free time at school for your personal/home life?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

5. How important is it for your professor to ask for your advice when planning classwork?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

6. How important is it to have professors you respect?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

7. How important is it to like the classmates you work with in a group?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

8. How important is it to get noticed when you do good work?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

9. How important is it for your college major (area of study) to be respected by your family and friends?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

10. How important is it for your college major (area of study) to get you a stable job?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

How Important 2

These questions ask about how important things are to you.

11. How important is it to help out your family and friends when they need something?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

12. How important is it for you to be careful with money and not spend more than you need to?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

13. How important is it to not want much? (to have few desires)

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

14. Imagine your perfect job. How important would it be for you to have chances to be promoted?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

15. How important is it for you to have enough free time for having fun?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

16. Imagine your perfect job. How important would it be for you to live in an area you like?

Not important at all	A little important	Somewhat important	Quite important	Very important	Extremely important
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

How Acceptable?

These questions will ask about how "acceptable" or "unacceptable" things are to do in the classroom.

Acceptable = OK to do
Unacceptable = Not OK to do

17. How acceptable is it for a student to arrive a little late to class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

18. How acceptable is it for a student to leave class to use the restroom (W.C.)?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

19. How acceptable is it for a student to skip a class session because they are sick?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

20. How acceptable is it for a student to skip a class session when they don't want to go?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

21. How acceptable is it for a student to address the professor by a name and a title? (For example: "Professor Smith")

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

22. How acceptable is it for a student to address the professor by title only? (For example: "Professor")

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

23. How acceptable is it for a student to address the professor by name only? (For example: "John")

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

24. How acceptable is it for a student to fail an assignment in class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

25. How acceptable is it for a student to fail a course?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

26. How acceptable is it for a student to correct the professor when the professor has made a mistake?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

27. How acceptable is it for a student to offer personal comments and opinions during class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

28. How acceptable is it for a student to ask the professor to change the class plan in a way that helps everybody, such as a few extra days for everybody to finish a paper?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

29. How acceptable is it for a student to ask the professor to change the class plan in a way that helps only that student, such as a few extra days for that student to finish a paper?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

30. How acceptable is it for a student to drink something during class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

31. How acceptable is it for a student to eat something during class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

32. How acceptable is it for a student to look at their cell phone during class?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

33. At work, how acceptable is it for an employee to break their company's rules if they think that doing so would help the company?

Totally Unacceptable	Somewhat Unacceptable	Slightly Unacceptable	Slightly Acceptable	Somewhat Acceptable	Totally Acceptable
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

Long Answer

These questions have longer answers than the others, but they are important! They ask about what you prefer at school.

34. When a group finishes a project together, is it better for them to all receive the same grade or to be graded individually?

Graded the same is a lot better	Graded the same is somewhat better	Graded the same is slightly better	Graded individually is slightly better	Graded individually is somewhat better	Graded individually is a lot better
○	○	○	○	○	○

35. Is it better for students to choose their own groups in class or for the professor to assign them?

Students choosing is a lot better	Students choosing is somewhat better	Students choosing is slightly better	The professor choosing is slightly better	The professor choosing is somewhat better	The professor choosing is a lot better
○	○	○	○	○	○

36. Is it better for groups in a class to stay the same between assignments or to change between assignments?

Groups staying the same is a lot better	Groups staying the same is somewhat better	Groups staying the same is slightly better	Changing groups is slightly better	Changing groups is somewhat better	Changing is a lot better
○	○	○	○	○	○

37. Is it better for the professor to push smart students to learn the most or to push all students to learn equally?

Smart students being pushed more is a lot better	Smart students being pushed more is somewhat better	Smart students being pushed more is slightly better	Everyone being pushed equally is slightly better	Everyone being pushed equally is somewhat better	Everyone being pushed equally is a lot better
○	○	○	○	○	○

38. Is it better for a professor to praise students whenever they try something or only if they succeed at it? (Praise means to tell someone "good job")

Praise always for trying is a lot better	Praise always for trying is somewhat better	Praise always for trying is slightly better	Praise only for success is slightly better	Praise only for success is somewhat better	Praise only for success is a lot better
○	○	○	○	○	○

39. Is it better for students try to believe what their professors believe or to try to form their own opinions?

Trying to believe what the professor believes is a lot better	Trying to believe what the professor believes is somewhat better	Trying to believe what the professor believes is slightly better	Trying to form their own is slightly better	Trying to form their own opinions is somewhat better	Trying to form their own opinions is a lot better
○	○	○	○	○	○

40. What is better, for a professor to follow a careful plan in class or for a professor to change class depending on what students need?

A careful plan is a lot better	A careful plan is somewhat better	A careful plan is slightly better	Changing the class as it goes is slightly better	Changing the class as it goes is somewhat better	Changing the class as it goes is much better
○	○	○	○	○	○

41. If you get a question wrong in class, is it better for the professor to tell you the answer directly or to help you find the answer on your own?

Direct answers are a lot better	Direct answers are somewhat better	Direct answers are slightly better	Helping me figure it out is slightly better	Helping me figure it out is somewhat better	Helping me figure it out is a lot better
○	○	○	○	○	○

42. In language class, do most students prefer to become good at the language or to get a good grade?

They strongly prefer to become good at the language	They somewhat prefer to become good at the language	They slightly prefer to become good at the language	They slightly prefer to get a good grade	They somewhat prefer to get a good grade	They strongly prefer to get a good grade
○	○	○	○	○	○

43. When working as a group, is it more important for students to have detailed instructions about what to do or for them to have freedom to solve problems in their own way?

Instructions are a lot more important	Instructions are somewhat more important	Instructions are slightly more important	Freedom is slightly more important	Freedom is somewhat more important	Freedom is a lot more important
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

Most Students

These questions ask about what is normal for students.

44. Do many students think language learning is stressful?

Almost none do	A few do	Some do	A lot do	Most do	Almost all do
○	○	○	○	○	○

45. Do many students compete with each other in class?

Almost none do	A few do	Some do	A lot do	Most do	Almost all do
○	○	○	○	○	○

46. Are many students afraid to openly disagree with their professor?

Almost none do	A few do	Some do	A lot do	Most do	Almost all do
○	○	○	○	○	○

47. Do many students find it embarrassing to admit in front of the class that their answer was wrong?

Almost none do	A few do	Some do	A lot do	Most do	Almost all do
○	○	○	○	○	○

48. Do many students find it embarrassing to respond "I don't know" to a question from the professor?

Almost none do	A few do	Some do	A lot do	Most do	Almost all do
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

Misc. Unipolar

These are some general questions.

49. Are you a happy person?

Not happy at all	A little happy	Somewhat happy	Fairly happy	Very happy	Extremely happy
○	○	○	○	○	○

50. How strict are the best professors?

Not strict at all	A little strict	Somewhat strict	Fairly strict	Very strict	Extremely strict
○	○	○	○	○	○

51. How helpful is it to get feedback on your work from other students?

Not helpful at all	A little helpful	Somewhat helpful	Fairly helpful	Very helpful	Extremely helpful
○	○	○	○	○	○

52. How proud are you to be a citizen of your country?

Not proud at all	A little proud	Somewhat proud	Fairly proud	Very proud	Extremely proud
○	○	○	○	○	○

53. How is your health?

Terrible	Bad	Not good	Somewhat good	Quite good	Excellent
○	○	○	○	○	○

54. Can working hard at school make a person more intelligent?

Definitely not	Probably not	Maybe not	Maybe yes	Probably yes	Definitely yes
○	○	○	○	○	○

55. Is hard work the most reliable way to get good results?

Definitely not	Probably not	Maybe not	Maybe yes	Probably yes	Definitely yes
○	○	○	○	○	○

56. Does a good professor need to have a specific answer to every single question that students ask?

Definitely not	Probably not	Maybe not	Maybe yes	Probably yes	Definitely yes
○	○	○	○	○	○

57. How often do you feel nervous or tense?

Never	Rarely	Sometimes	Often	Usually	Always
○	○	○	○	○	○

58. How often do circumstances or other people prevent you from doing what you really want to do?

Never	Rarely	Sometimes	Often	Usually	Always
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

Misc. Bipolar

These are some simple questions about school.

59. Do you prefer to do school work alone or in a group?

I strongly prefer group work	I somewhat prefer group work	I slightly prefer group work	I slightly prefer working alone	I somewhat prefer working alone	I strongly prefer working alone
○	○	○	○	○	○

60. Do you prefer when classwork is easy or hard for you?

I strongly prefer easy work	I somewhat prefer easy work	I slightly prefer easy work	I slightly prefer hard work	I somewhat prefer hard work	I strongly prefer hard work
○	○	○	○	○	○

61. Is it better to learn by practicing familiar tasks or new tasks?

Familiar tasks are a lot better	Familiar tasks are somewhat better	Familiar tasks are slightly better	New tasks are slightly better	New tasks are somewhat better	New tasks are a lot better
○	○	○	○	○	○

62. Is more important to like a professor or to respect a professor?

Liking matters a lot more	Liking matters somewhat more	Liking matters slightly more	Respect matters slightly more	Respect matters somewhat more	Respect matters a lot more
○	○	○	○	○	○

63. Is it more important for class to be fun or interesting?

Fun matters a lot more	Fun matters somewhat more	Fun matters slightly more	Interest matters slightly more	Interest matters somewhat more	Interest matters a lot more
○	○	○	○	○	○

64. Who is more responsible for making learning happen in the classroom: the student or the professor?

The student is a lot more responsible	The student is somewhat more responsible	The student is slightly more responsible	The professor is slightly more responsible	The professor is somewhat more responsible	The professor is a lot more responsible
○	○	○	○	○	○

65. Are students who try very hard at school mostly respected or made fun of?

Respected a lot more	Respected somewhat more	Respected slightly more	Made fun of slightly more	Made fun of somewhat more	Made fun of a lot more
○	○	○	○	○	○

66. Is a good professor more like a boss or a friend?

A lot more like a boss	Somewhat more like a boss	Slightly more like a boss	Slightly more like a friend	Somewhat more like a friend	A lot more like a friend
○	○	○	○	○	○

67. What's more important for success at school, for a student to be naturally intelligent or for that student to work hard?

Being intelligent is a lot a lot more important	Being intelligent is somewhat more important	Being intelligent is slightly more important	Working hard at school is slightly more important	Working hard at school is somewhat more important	Working hard at school is a lot more important
○	○	○	○	○	○

68. For most issues, is there only one correct opinion or are there many correct opinions?

Always only one correct opinion	Usually only one correct opinion	More often only one correct opinion	More often many correct opinions	Usually many correct opinions	Always many correct opinions
○	○	○	○	○	○

69. How strict or relaxed should a professor be?

Very strict is best	Somewhat strict is best	A little strict is best	A little relaxed is best	Somewhat relaxed is best	Very relaxed is best
○	○	○	○	○	○

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

Demographic Questions

These are background questions.

* 70. How old are you?

71. What is your year in college?

72. What is your sex?

73. What is your college major (area of study)?

Other (please specify)

* 74. What country are you from?

* 75. What country do you live in now?

76. What is the name of your college/university?

[END OF PAGE]

Survey on Undergraduate Classroom Preferences

77. Thanks so much for completing this survey!

If you have any feedback for the researchers, leave it below.

Appendix C: Raw Data for National Item Means and Standard Deviations[2]

11	10	9	8	7	6	5	4	3	2	1	Question #
5.14	5.04	4.22	3.61	4.17	5.03	3.56	4.66	4.66	3.50	2.39	USA mean
0.91	1.07	1.27	1.10	1.10	1.02	1.19	1.04	0.96	1.76	1.76	USA SD
181	180	178	180	180	180	180	180	179	181	181	USA # of Responses
5.25	5.35	4.58	3.78	4.16	5.29	3.04	4.20	5.11	3.71	2.37	South Africa mean
0.81	0.96	1.46	1.41	1.12	0.84	1.33	1.30	0.85	1.81	1.69	South Africa SD
92	93	92	93	93	93	93	93	93	93	93	South Africa # of Responses
4.42	3.95	3.81	3.72	3.90	4.38	3.56	4.11	4.14	3.72	1.94	China mean
1.12	1.21	1.27	1.25	1.29	1.11	1.07	1.03	1.04	1.54	1.33	China SD
64	64	64	64	63	64	64	64	64	64	64	China # of Responses
4.38	3.72	3.69	3.93	3.74	4.25	3.66	4.21	3.72	3.31	2.34	Turkey mean
1.25	1.24	1.26	1.29	1.34	1.26	1.14	1.25	1.33	1.69	1.44	Turkey SD
60	61	61	61	61	61	61	61	61	61	61	Turkey # of Responses
5.19	3.73	3.42	4.48	4.05	4.98	3.36	4.58	5.00	4.19	2.64	Russia mean
0.75	1.42	1.58	1.06	1.34	1.17	1.32	1.25	1.05	1.43	1.82	Russia SD
59	59	59	58	59	59	58	59	59	59	59	Russia # of Responses
5.03	4.21	3.24	4.16	3.88	4.60	3.07	4.98	5.09	4.02	2.59	Finland mean
0.79	1.22	1.39	1.18	1.16	0.96	1.25	1.22	0.80	1.91	1.91	Finland SD
58	58	58	58	58	57	58	58	58	58	58	Finland # of Responses
4.69	4.73	4.21	4.37	4.43	4.76	4.04	4.29	4.71	3.15	2.19	Vietnam mean
0.94	1.17	1.33	1.18	0.94	0.77	1.03	1.16	1.00	1.33	1.46	Vietnam SD
52	52	52	51	51	50	52	52	52	52	52	Vietnam # of Responses
5.10	4.52	3.68	4.44	4.54	5.23	3.75	4.87	4.96	3.77	2.17	France mean
1.10	1.04	1.35	1.00	1.19	0.94	1.07	1.06	1.15	1.83	1.75	France SD
48	48	47	48	48	48	48	47	48	48	48	France # of Responses

[2] Note: all SDs calculated using the n-1 method

27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12
4.45	4.78	2.06	2.88	3.97	4.66	5.25	2.38	5.32	5.24	3.21	4.97	4.73	4.52	3.35	4.77
1.29	1.18	1.19	1.32	1.23	1.22	1.00	1.23	0.86	1.10	1.12	1.02	1.10	1.24	1.21	1.09
179	181	180	179	180	181	181	180	180	180	181	181	180	181	181	181
4.54	4.91	2.13	2.77	1.97	5.39	5.45	1.77	4.91	4.51	2.77	4.89	4.24	4.97	3.78	5.17
1.43	1.06	1.28	1.34	1.21	0.98	1.04	1.27	1.09	1.51	1.47	1.03	1.21	1.13	1.21	0.88
91	92	93	93	92	92	91	91	92	92	92	93	93	92	93	93
4.66	4.72	2.70	3.16	3.69	4.22	4.60	2.27	4.89	4.48	3.33	4.36	4.08	4.08	3.38	4.09
1.29	1.25	1.27	1.16	1.47	1.50	1.41	1.03	1.26	1.45	1.30	1.10	1.17	1.12	1.23	1.00
64	64	63	64	64	63	62	63	63	64	64	64	64	64	64	64
3.87	4.18	3.43	3.61	2.73	4.20	4.27	3.37	4.56	4.17	3.77	4.35	4.55	3.97	3.45	4.02
1.54	1.72	1.33	1.46	1.44	1.47	1.69	1.54	1.59	1.79	1.60	1.34	1.24	1.09	1.17	1.20
61	60	60	59	60	60	60	60	59	59	60	60	60	60	60	60
4.93	4.79	2.61	3.78	2.46	3.95	4.68	3.10	5.37	5.71	4.22	4.88	4.39	4.46	2.80	4.47
1.00	1.04	1.30	1.30	1.52	1.88	1.73	1.48	1.20	0.64	1.43	0.85	1.25	1.04	1.32	1.29
59	58	59	59	59	59	59	59	59	59	59	59	59	59	59	59
5.10	5.53	3.81	4.16	5.50	4.45	3.84	3.21	5.84	5.29	4.07	5.02	5.21	3.12	2.79	4.53
0.87	0.65	1.49	1.48	0.98	1.61	1.90	1.52	0.45	1.08	1.28	0.96	0.85	1.44	1.18	1.10
58	58	57	58	58	58	58	58	58	58	58	58	58	57	58	58
5.04	5.17	2.69	3.50	2.25	4.76	4.88	3.00	4.94	5.17	3.63	4.94	4.69	4.71	3.35	4.71
1.05	0.94	1.20	1.23	1.34	1.26	1.32	1.50	1.38	1.26	0.95	0.87	1.02	1.10	1.45	1.21
52	52	52	52	52	51	52	51	52	52	52	52	52	51	52	52
4.75	5.27	3.48	3.77	3.15	5.40	4.74	1.83	5.21	4.35	3.46	4.96	4.85	4.40	3.29	4.35
1.09	0.97	1.14	1.21	1.63	1.02	1.30	1.21	1.12	1.33	1.12	0.89	0.99	1.29	1.12	1.11
48	48	48	48	48	48	47	47	48	48	48	48	47	48	48	48

43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
3.06	4.12	4.12	4.57	4.95	3.10	4.61	3.55	3.23	4.15	3.08	3.31	4.54	5.41	2.70	4.77
1.25	1.43	1.35	1.17	1.08	1.40	1.49	1.39	1.40	1.45	1.29	1.27	1.24	0.91	1.32	1.04
180	180	180	181	179	180	181	179	180	181	181	181	181	181	179	180
2.88	4.40	4.39	4.24	5.18	2.33	5.48	3.73	3.30	4.01	2.74	2.60	3.00	4.72	1.87	4.74
1.53	1.60	1.44	1.54	1.15	1.35	1.04	1.64	1.86	1.80	1.25	1.39	1.53	1.42	1.15	1.09
93	93	92	93	91	92	92	92	92	92	93	92	91	92	92	91
3.65	2.71	4.80	3.98	4.58	3.00	3.92	3.49	2.89	3.89	3.65	3.03	3.44	4.70	2.69	4.69
1.26	1.35	1.07	1.34	1.15	1.54	1.48	1.39	1.36	1.40	1.22	1.22	1.31	1.26	1.19	1.21
63	62	64	64	64	64	64	63	64	64	63	64	62	64	64	64
3.15	3.21	4.02	3.92	4.15	3.03	3.52	3.41	2.70	3.72	3.13	3.03	3.28	3.90	2.61	4.07
1.28	1.53	1.58	1.45	1.49	1.37	1.71	1.43	1.38	1.52	1.23	1.32	1.42	1.57	1.19	1.54
61	61	61	61	60	61	61	61	60	61	61	61	61	61	61	61
3.27	3.66	4.88	4.75	5.40	3.02	3.80	3.59	2.29	3.46	3.71	3.71	2.31	4.92	2.80	5.17
1.44	1.46	1.44	1.15	0.90	1.43	1.65	1.35	1.38	1.68	1.30	1.23	1.10	1.24	1.35	0.89
59	58	59	59	58	58	59	59	59	59	59	59	59	59	59	59
3.31	3.39	4.02	4.84	5.62	2.43	4.40	3.57	3.28	3.67	3.23	4.00	4.34	5.62	3.95	5.53
1.16	1.40	1.46	1.01	0.67	1.16	1.62	1.11	1.32	1.46	1.30	1.32	1.36	0.75	1.43	0.68
58	57	58	58	58	58	58	58	57	58	57	58	58	58	58	58
3.31	3.19	4.69	4.50	4.92	2.54	4.62	3.22	2.43	4.04	3.76	3.18	3.13	4.69	2.62	5.00
1.44	1.69	1.12	1.36	1.13	1.41	1.43	1.50	1.36	1.66	1.49	1.26	1.55	1.26	1.35	1.14
52	52	51	52	51	52	52	51	51	51	51	51	52	52	52	52
3.23	4.33	4.88	4.79	5.23	2.21	4.69	3.63	2.85	3.15	3.40	2.25	2.74	3.85	2.64	5.06
1.28	1.23	1.05	1.08	1.08	1.12	1.37	1.42	1.57	1.41	1.20	1.03	1.44	1.49	1.26	1.27
48	48	48	48	48	48	48	48	48	48	47	48	47	48	47	48

59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
4.24	3.22	3.57	3.39	4.93	5.04	4.90	4.62	3.72	3.38	4.33	4.03	4.18	3.82	3.29	3.99
1.36	0.99	0.96	1.17	0.99	0.93	0.78	1.33	1.21	0.91	1.00	1.19	1.08	1.15	1.15	1.02
181	180	181	180	180	180	181	181	180	181	180	181	181	180	181	180
4.65	3.61	3.80	3.09	5.12	4.77	4.80	4.13	4.24	3.88	4.37	4.23	4.07	3.77	3.43	3.91
1.31	1.19	1.06	1.43	1.10	1.13	0.97	1.45	1.29	1.00	1.05	1.52	1.37	1.28	1.28	1.06
92	92	93	92	91	93	92	93	91	93	92	93	91	93	93	93
3.66	3.08	3.60	3.22	4.41	4.47	4.44	4.34	3.83	3.14	3.88	3.28	3.61	3.71	3.69	3.67
1.26	0.80	0.79	1.13	1.10	1.13	0.78	1.24	1.18	1.21	1.15	1.16	1.22	1.37	1.07	0.99
64	64	63	64	63	64	63	64	64	64	64	64	64	63	64	64
3.80	3.87	3.92	3.56	4.21	3.57	4.66	3.66	4.00	3.36	3.78	3.82	3.69	3.61	3.72	4.08
1.58	1.16	0.99	1.30	1.21	1.38	0.85	1.47	1.10	1.10	1.28	1.31	1.15	1.20	1.25	1.08
61	61	61	61	61	61	61	61	61	61	60	61	61	61	61	61
4.60	3.34	3.78	3.51	4.22	4.56	4.36	3.36	3.73	3.63	3.76	3.44	3.37	3.29	2.63	3.31
1.21	0.88	1.10	1.36	1.40	0.99	1.01	1.54	1.24	1.05	1.23	1.32	1.16	1.31	1.11	1.09
58	59	59	59	59	59	59	59	59	59	58	59	59	59	59	59
4.76	3.47	3.67	2.07	4.57	4.93	4.79	4.00	3.74	3.07	4.14	3.48	3.78	3.31	2.57	3.31
1.20	0.99	1.02	1.14	0.96	1.02	0.81	1.40	1.13	0.83	1.21	1.42	1.31	1.30	1.19	0.96
58	58	58	58	58	57	58	58	58	58	58	58	58	58	58	58
3.85	3.25	3.65	3.81	4.17	4.19	4.48	3.77	4.15	3.44	4.10	3.88	4.29	4.17	3.56	3.44
1.36	1.08	0.82	1.34	1.28	1.03	0.75	1.44	1.16	1.13	0.97	1.25	1.04	1.00	1.07	0.87
52	52	51	52	52	52	52	52	52	52	50	52	52	52	52	52
3.52	3.21	3.58	3.21	4.46	3.91	5.17	4.10	3.96	3.52	4.40	3.15	3.65	3.46	3.21	3.25
1.32	0.91	1.26	1.41	1.19	1.27	0.87	1.50	1.21	0.84	1.02	1.50	1.18	1.26	1.08	1.01
48	48	48	48	48	47	48	48	48	48	48	48	48	48	48	48

69	68	67	66	65	64	63	62	61	60
3.72	4.66	4.64	3.54	2.42	3.41	4.46	4.37	3.74	3.17
1.00	0.93	1.17	1.19	1.02	1.30	1.19	1.38	1.24	1.09
181	180	181	179	179	181	180	180	180	181
3.29	4.77	4.92	3.58	3.07	3.55	5.02	4.81	3.90	3.78
1.18	0.92	1.10	1.40	1.56	1.61	1.14	1.54	1.59	1.13
92	93	93	93	92	92	93	93	93	92
4.02	4.73	4.27	5.02	2.56	3.48	4.50	3.25	4.09	3.47
1.05	0.98	1.01	0.93	0.97	1.23	1.27	1.55	1.29	1.18
62	64	64	64	64	64	64	64	64	64
3.85	4.00	3.52	3.89	2.90	3.38	3.75	3.34	3.59	2.95
1.14	1.22	1.25	1.44	1.23	1.49	1.56	1.76	1.52	1.23
61	60	61	61	61	61	60	61	61	61
3.76	4.53	4.05	4.15	2.78	4.24	5.12	4.00	4.56	3.76
1.01	0.88	1.41	1.30	1.29	1.32	1.05	1.71	1.18	1.17
59	59	59	59	59	59	59	59	59	58
3.91	4.78	4.81	3.55	2.60	3.31	4.97	3.59	4.22	3.45
1.00	0.70	1.02	1.05	1.06	1.35	0.94	1.41	1.03	1.08
58	58	58	58	58	58	58	58	58	58
3.83	4.69	4.12	4.83	2.24	3.63	4.79	3.84	4.34	3.87
1.00	0.96	1.48	1.20	1.24	1.37	1.53	1.72	1.30	1.19
52	52	52	52	51	52	52	51	50	52
3.81	4.54	4.15	3.42	3.17	4.04	4.77	3.75	3.79	3.17
1.05	0.96	1.22	1.24	1.20	1.32	1.19	1.64	1.19	1.03
48	48	48	48	48	48	48	48	48	48

Appendix D: Hofstede Indexes for Participant Countries[3]

	USA	South Africa	China	Turkey	Russia	Finland	Vietnam	France	Range of Countries Included[4]
Power Distance	40	49	80	66	93	33	70	69	60
Individualism vs. Collectivism	91	65	20	37	39	63	20	71	71
Uncertainty Avoidance	46	49	30	85	95	59	30	86	65
Masculinity vs. Femininity	62	63	66	45	36	26	40	43	40
Long vs. Short Term Orientation	26	34	87	46	81	38	57	63	61
Indulgence vs. Restraint	68	63	24	49	20	57	35	48	48

[3] All scores taken from Hofstede, Hofstede, and Minkov (2010).
[4] These dimensions all have theoretical global ranges of ~100, so a similar range within the included countries would indicate good representation of the global spectrum.

Appendix E: Correlations between Hofstede Indexes and Survey Item Scores

Intended Dimension[5]	Question #	PD	IDV	UAI	MAS	LTO	IVR
PD*	5	0.43	-0.38	-0.13	0.01	0.29	-0.33
PD*	6	-0.13	0.61	0.13	0.13	-0.23	0.32
PD*	46	-0.07	-0.24	-0.75	0.47	-0.20	0.10
PD	21	0.00	0.30	-0.30	0.69	-0.21	0.24
PD	22	-0.38	0.49	-0.15	0.24	-0.41	0.55
PD	23	-0.56	0.34	-0.12	-0.27	-0.21	0.27
PD	26	-0.35	0.26	-0.19	-0.46	-0.10	0.14
PD	41	0.79	-0.41	0.05	0.06	0.82	-0.74
PD	51	0.01	-0.22	-0.24	0.21	-0.19	0.16
PD	66	0.61	-0.89	-0.51	0.16	0.67	-0.77
IDV*	3	-0.26	0.46	0.05	-0.30	-0.18	0.20
IDV*	4	-0.39	0.62	0.40	-0.60	-0.23	0.30
IDV*	9	-0.20	0.15	-0.57	0.71	-0.39	0.38
IDV*	10	-0.56	0.55	-0.48	0.43	-0.63	0.67
IDV	27	0.04	-0.09	-0.21	-0.47	0.27	-0.31
IDV	30	-0.50	0.28	-0.40	-0.09	-0.31	0.21
IDV	31	-0.81	0.44	-0.47	0.11	-0.62	0.61
IDV	32	-0.15	-0.11	-0.01	-0.51	-0.03	-0.16
IDV	34	-0.39	-0.04	-0.79	0.53	-0.44	0.30
IDV	35	-0.86	0.68	-0.33	0.36	0.68	0.81
IDV	36	-0.23	0.63	0.35	0.21	-0.16	0.35
IDV	39	-0.25	0.42	0.14	-0.46	-0.09	0.11
IDV	42	-0.34	0.81	0.31	0.13	-0.49	0.61
UAI*	33	0.72	-0.67	-0.03	-0.33	0.81	-0.87
UAI*	53	-0.58	0.81	0.19	0.05	-0.55	0.75
UAI*	56	0.62	-0.38	0.01	0.31	0.29	-0.37
UAI*	57	0.16	-0.27	0.47	-0.17	-0.09	-0.03
UAI	40	-0.19	0.47	0.28	-0.61	-0.10	0.10
UAI	43	0.48	-0.64	-0.23	-0.12	0.77	-0.73
UAI	44	-0.29	0.15	-0.22	0.67	-0.49	0.46
UAI	50	0.19	0.19	0.25	0.23	-0.12	0.12
UAI	54	-0.51	0.46	-0.40	0.17	-0.33	0.31
UAI	60	0.23	-0.37	-0.36	-0.08	0.25	-0.38
UAI	64	0.70	-0.08	0.57	-0.25	0.58	-0.54
UAI	67	-0.68	0.56	-0.45	0.21	-0.47	0.53
UAI	69	0.27	-0.43	-0.01	-0.34	0.49	-0.49
MAS*	7	0.09	0.23	-0.10	0.00	0.01	0.05
MAS*	8	0.45	-0.25	0.51	-0.79	0.41	-0.47

[5] Each item adapted from Hofstede's VSM (2013c) is indicated by an asterisk next to its intended dimension.

MAS*	14	0.30	0.03	-0.15	0.53	0.01	-0.02
MAS*	16	-0.41	0.57	0.02	-0.38	-0.40	0.37
MAS	24	0.13	-0.19	0.53	-0.93	0.26	-0.30
MAS	25	-0.06	-0.11	0.43	-0.71	0.10	-0.06
MAS	28	-0.17	0.20	-0.01	-0.56	0.08	-0.08
MAS	29	-0.30	0.05	0.10	-0.69	-0.02	-0.03
MAS	37	-0.51	0.51	-0.38	0.27	-0.51	0.58
MAS	38	0.30	-0.23	0.02	0.28	0.20	-0.30
MAS	45	0.14	-0.34	-0.44	0.66	0.01	0.02
MAS	62	-0.34	0.57	-0.10	0.32	-0.52	0.50
MAS	65	0.10	0.30	0.66	0.03	0.02	0.17
LTO*	11	-0.32	0.72	0.25	-0.12	-0.34	0.39
LTO*	12	-0.47	0.46	-0.33	0.17	-0.56	0.50
LTO*	52	-0.55	0.53	-0.58	0.66	-0.37	0.54
LTO*	55	-0.68	0.74	-0.30	0.55	-0.65	0.76
LTO	47	-0.57	0.23	-0.68	0.28	-0.66	0.56
LTO	48	-0.46	0.22	-0.34	0.35	-0.72	0.57
LTO	59	-0.42	0.33	0.08	-0.25	-0.40	0.28
LTO	61	0.40	-0.46	-0.08	-0.46	0.51	-0.65
LTO	68	-0.29	0.17	-0.62	0.16	-0.02	0.07
IVR*	13	-0.13	0.05	-0.39	0.76	-0.30	0.37
IVR*	15	-0.57	0.45	0.19	-0.71	-0.47	0.44
IVR*	49	-0.63	0.74	-0.25	0.22	-0.59	0.72
IVR*	58	-0.24	0.03	0.41	-0.20	-0.46	0.36
IVR	17	0.30	-0.32	0.51	-0.85	0.35	-0.48
IVR	18	-0.01	0.07	-0.01	-0.43	0.02	-0.19
IVR	19	-0.40	0.47	0.11	-0.52	-0.15	0.16
IVR	20	0.09	-0.42	0.23	-0.66	0.04	-0.28
IVR	63	0.01	0.14	-0.05	-0.25	0.14	-0.13

Appendix F: Output of Principle Components Analysis

Rotated Component Matrix[6]

	Component						
	1	2	3	4	5	6	7
Question 03	.910	.293		.151	.187		-.169
Question 04	.628	-.354		.665		.113	-.145
Question 05	-.366		-.561			.448	.580
Question 06	.499	.706	-.106	.358	.200	.126	-.240
Question 07	.353	.443	-.395	.299	.422	.454	.223
Question 08	.501	-.271	-.802		.157		
Question 09	-.215	.851	.218		.257		.327
Question 10	.228	.725	.383	.241	.376		.268
Question 11	.712	.476		.397			-.311
Question 12	.531	.730	.277		.173	-.218	.170
Question 13	-.598	.613	.204		.460		.106
Question 14		.921	-.325			.127	
Question 15	.451	-.486		.659	.112	-.106	.311
Question 16	.847	.269		.418			.160
Question 17	.314	-.694	-.446		-.412	-.224	
Question 18	.755				-.606		.223
Question 19	.841	-.295	.252	.272	-.214		-.119
Question 20		-.582	-.226	-.103	-.466	-.493	.373
Question 21		.976				.200	
Question 22	.137	.488		.372	.761	.126	
Question 23	.270	-.659	.606	.246	-.160	.199	
Question 24	.361	-.805	-.401	.162		-.173	
Question 25		-.880	-.163	.252	.316	-.154	-.105
Question 26	.836	-.183	.112	.127	.421	.223	.112
Question 27	.898	-.148	-.103	-.245	.109	.272	.122
Question 28	.957	-.219				.177	
Question 29	.445	-.825	.208	.144	-.221		
Question 30	.624		.598	-.117	-.446		.198
Question 31		-.237	.818	.289	-.197		.384
Question 32	.454	-.433	.190	-.188	-.643	-.284	.204
Question 33	.182	-.358	-.601	-.407	-.208	.473	.214
Question 34	-.163	.417	.562	-.310	-.182		.588

[6] Values below .10 suppressed

Question 35		.103	.902	.291	.255		-.153
Question 36	.248	.287	.320	.226			-.834
Question 37	.398	.625	.323	.163	.560		
Question 38	-.453			-.177	-.869		
Question 39	.959			.144			-.226
Question 40	.858		-.170	.450		.139	
Question 41	.192	.183	-.623	-.375	.137	.566	-.247
Question 42	.273	.621		.633	.196		-.309
Question 43		-.636	-.110	-.517		.554	
Question 44	-.727	.389	.436		-.176	-.286	.119
Question 45	-.822	.260		-.201	.299	.165	.315
Question 46	-.269	.473		-.222	.213	.168	.759
Question 47		.472	.343	.133	.234		.764
Question 48	-.130	.649	.324			-.523	.426
Question 49	.303	.439	.351	.526	.510	.224	
Question 50		.829	-.352		.179	-.289	-.251
Question 51	-.222	.455	-.180	-.183	.725	-.310	.237
Question 52	-.133	.226	.744	.228	.111	.557	
Question 53			.249	.822	.450	.149	-.171
Question 54	.609	.272	.660		-.323		
Question 55	.137	.585	.722	.235	.138		-.205
Question 56	-.464	.473	-.621	-.104	-.212	.146	.315
Question 57	-.342		-.227	-.155		-.873	-.204
Question 58	-.337			.146		-.919	
Question 59	.626	.168	.358		-.287	-.577	-.180
Question 60	.608	.363	-.156	-.660	.104		.139
Question 61	.706	-.121	-.316	-.574	-.232		
Question 62	.351	.874	.184	.183		-.209	
Question 63	.908	.246		-.208	.137		-.208
Question 64	.333	.212	-.789			.215	-.411
Question 65	-.171	.118	-.186	.290	.405	-.232	-.788
Question 66	-.182	-.117	-.234	-.814	-.104	.319	.350
Question 67	.584	.317	.723		.166		
Question 68	.687	.238	.437	-.299	.190	.388	
Question 69	-.137	-.828	-.132		-.232	.427	.187

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 13 iterations).