

Methodological Issues in Studying Cultural Dimensions with Special Reference to Educational Context

Abdulaziz Alshahrani

Department of Foreign Languages

College of Arts and Humanities

Albaha University, Albaha City, Kingdom of Saudi Arabia

Abstract

The aim of this review was to evaluate certain methodological issues related to the measurement of cultural dimensions and their effects with special reference to educational contexts. Using Google Scholar with the exact topics as search terms, 50 research reports were obtained. The results obtained from the critical analysis of the methodologies used in these reports are discussed in this review. Most studies were on power distance and individualism/collectivism dimensions of culture. A large number of conceptual frameworks and as many as 121 measurement instruments have been proposed by different workers. Research approach in any particular study is determined by the framework and the instrument chosen or self-developed instruments. Surveys and interviews are more commonly used. Not estimating internal consistency or reliability tests in some works makes it difficult to judge the validity of the method of data analysis. Generally the sample size is in the range of 200-500 participants in surveys. Small sample sizes used in a few works may affect the validity and applicability of their findings. It is concluded that large groups of scientists doing a common research programme across several countries is better than individual researches. Meta-analyses are also superior to individual researches. Such methods ensure validity and replicability of the findings. Although none of the research used scenario analysis, it is also a promising method.

Keywords: cultural dimensions, educational context, ESL, EFL, critical analysis, individualism, collectivism, GLOBE, PISA

Cite as: Alshahrani, A. (2017). Methodological Issues in Studying Cultural Dimensions with Special Reference to Educational Context. *Arab World English Journal*, 8 (1).

DOI: <https://dx.doi.org/10.24093/awej/vol8no1.3>

Introduction

Many scholars and others have proposed methods of measuring the cultures of countries and regions. The initial motivation for this was provided by globalised firms relocating some of their operations to other countries. These firms had to overcome many hurdles in their operations mainly due to cultural differences between home and host countries. These problems were created by miscommunications due to language problems, wrong understanding of social and cultural practices and problems with political and regulatory systems. The cultural dimensions proposed by various authors have been discussed by Dadfar, Helander, Norberg, Schuster and Zufferey (2003) and House, Mansour, Hanges and Dorfman (2002). One research approach classifies country cultures as single dimensional or multi-dimensional. The second body of research incorporates various theories into a Global Leadership and Organizational Behavioral Effectiveness (GLOBE) programme, which gives annual estimates of national cultures. These estimates are aimed at business leadership. However, the most widely accepted and used concept is that of Hofstede (as cited in Hofstede, et al. (1990)) six cultural dimensions, viz. power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance, long-term orientation and indulgence versus restraint. More research has been conducted on the first four topics. However, there had been some research works on other conceptual approaches also.

Depending upon the framework, the methods used for measurement of culture in its various dimensions differ depending upon the concept and the framework. All of them need not necessarily agree with Hofstede.

This review is aimed at evaluating some methodological issues related to the measurement of cultural dimensions and their effects with special emphasis on educational contexts.

Method of This Review

The literature search was done using Google Scholar as the search engine. The search term “Methods of measuring cultural dimensions” was used for collection of literature from the first five pages of the search engine and then another search selecting the year 2012 and beyond till the latest. This procedure facilitates selection of most of the old and new research works on the topic. Using this method, 50 research reports were collected and used in this review. The search term automatically filtered works not related directly to the topic. Those which describe the methodology in detail only were included in this review.

Results and Discussions

The results obtained by the critical analysis of the methodologies used in the selected works are discussed below.

General Methodological Issues

In his elaborate study, Denison (1984) uses comparative survey and ethnographic method to characterise organisational culture and relate it to performance. The survey consists of 125 items on 43747 participants from 6671 work groups of 34 companies. The study finds that participative culture and well-organised work environment lead to better performance.

The theory of basic human values as the fundamental part of all cultures is tested for greater validity across many cultures in the work of Schwartz, et al. (2001) replacing their earlier Schwartz Value Survey (SVS) with Portrait Value Questionnaire (PVQ). In his work, Schwartz (2006) proposes a theory of seven cultural value orientations. These form three cultural value dimensions. The cultural orientations are derived from a priori theorisation and are independent than orthogonal. The author uses data from 73 countries to validate his theories. These theories are alternative proposals to Hofstede's cultural dimensions. SVS is used for the survey of 80 school teachers from 58 national groups. Also 115 college students from 64 national groups are surveyed. In another PVQ survey, 20 countries are split into 52 cultural groups with minimum 40 respondents. In another paper, Schwartz (2012) explains Schwartz's theory of basic human values. The nature of values as well as common and distinguishing features of different values is discussed. According to the theory, there are ten basic values recognised across all cultures. Values form a circular structure reflecting motivations expressed by each value. This circular nature is universal in nature and captures compatibility and conflicts among them. After explaining the psychological principles of the theory, the two methods of measurement (the Schwartz Value Survey and the Portrait Values Questionnaire) are elaborated. The theory is validated by the results from 82 countries.

According to Singelis, Triandis, Bhawuk and Gelfand (1995), vertical collectivism contains perception of self as a part of a collective and accepts inequalities within the collective. Inequality is perceived in vertical collectivism and in horizontal individualism and equality is perceived in horizontal collectivism and vertical individualism. The need to measure all the four to categorise individualistic and collectivist cultures is stressed and methods of measuring them by defining the constructs and items are given by the authors. These concepts and their use are different from those of Hofstede.

It should be noted that at least one of the authors of the above papers is a critic of Hofstede's concepts. Hence, their results provide an altogether different perspective on culture. In his paper, Hofstede (1998) contradicts the tendency to identify organisational culture as manifestations of values and attitudes by imposing the sentiments of the researcher. He could not obtain any relationship between employee attitudes and values or organisational values.

In their review, Alesina and Giuliano (2015) note the existence of a two-way causal relationship between culture and institutions. More specifically, using secondary data from various sources, Holmes, Miller, Hitt and Salmador (2013) show that informal institutions (e.g. in the form of the cultural dimensions of group collectivism and future orientation (GLOBE dimensions)) influence the formal institutions of a country. In turn, the three formal institutions (political, economic and regulatory) affect the foreign direct investment levels of the country. The authors base their explanations on institutional theory.

Calori and Sarnin (1991) under taken elaborate field study with questionnaire survey on work-related values and management practices and economic performance data of five mature single business French firms pursuing differentiation strategies. Some cultural attributes and related management practices are positively correlated with organisational relative growth performance and some of these, and a few others are correlated with relative return on investment and relative return on sales. The relationship of cultural factors with profitability is not clear. The authors find it possible to operationalise organisational culture through values and management practices. Traditional human values, organisation's relationship with environment

and customer orientation are important. Organisational culture has a greater impact on growth than profitability.

Scott, Mannion, Davies and Marshall (2003) list organisational culture measurement instruments proposed and used by different authors which can be used for health care sector. From these, they select some instruments which can be used in health care sector. The selected ones consist of three typological and 10 dimensional approaches.

Predictors for selection of UK managers for a cross-cultural training programme in Japan are evaluated using assessment centre exercises and interviews. Openness is a good predictor of their training performance. Cognitive ability is strongly related to language acquisition. A group discussion is used for measuring adaptation, communication, and teamwork. These also are significant predictors (Lievens, Harris, Van Keer, & Bisqueret, 2003). So far, this is the first work on measurement of cultural factors on individual attributes (not organisational or national culture) using methods other than surveys.

In an earlier paper, an introduction to the project GLOBE is given by House, Mansour, Hanges and Dorfman (2002). This programme covers culture and leadership aspects of 61 countries. Nine dimensions are used for measuring national cultures: performance orientation, future orientation, humane orientation, power distance, uncertainty avoidance, assertiveness, institutional collectivism, in-group collectivism, and gender egalitarianism. Some of these dimensions are based on Hofstede. Some others have items used by Hofstede. Thousands of middle managers working in various sectors are surveyed in these countries. Their attributes of culture and effective leadership are compared. Six global leadership attributes are identified from these. The authors give the objectives of GLOBE programme, first two phases have been completed. The third phase is in planning. Both qualitative and quantitative methods are used. The constructs, questionnaire items, examples of parallel items for all cultural scales, questions related to culturally-endorsed implicit leadership theory (CLT), a theoretical model of GLOBE and a list of the theoretical propositions are given. The basic theory is that the attributes and entities distinguishing one culture from another are predictive of organisational practices and attributes and behaviours of the leaders which are most frequently enacted, acceptable and effective in that culture. Though largely based on Hofstede concepts, the method of measurement contains a few modifications and additions to Hofstede concepts.

In most of his papers, Hofstede has not given the exact procedures of measuring the dimensions with survey items and sampling details, but only the findings. However, in Hofstede, Neuijen, Ohayv and Sanders (1990) use 180 interviews (to get a feel of the culture of their organisations and collect ideas for items to be included in the questionnaire) followed by questionnaire survey consisting of 135 questions on 1295 participants from 20 units from 10 different organisations in Denmark and Netherlands. Of these, 22 questions assess work goals, 28 questions deal with general beliefs, seven questions are other value items generated from previous value items and based on interviews, 13 questions are on reasons for promotions and dismissals; there are four demographic questions and one open question. But in the results, the questions are classified into three value constructs and six practice constructs restricted to factor loadings over 0.6 only. Thus the original questionnaire, the original fully categorised set or a full set of revised categories are not available in the paper. The utility of the work for external validation is limited by this problem.

Each claim is based on the methodology developed by the authors. There is no study comparing the methodologies to verify these rival claims. In a review, comparing different approaches to measurement of cultural dimensions for international marketing, Soares, Farhangmehr and Shoham (2007) endorse Hofstede's dimensions. But they do not compare the different approaches in an empirical test.

Definitions, approaches, challenges and limitations found 121 identified quantitative measurement instruments of culture as reviewed by Taras, Rowney and Steel (2009). They also discuss the dimensionality of culture models, collection, and analysis of data for culture measurement, levels of culture measurement, issues related to cross-cultural survey equivalence and the reliability and validity of culture measures. The current approaches and challenges are discussed. The best practices are suggested on the basis of the reviewed aspects. In the end, the authors give a list of measures for each of the Hofstede's six cultural dimensions, instruments containing the dimension (from the review) and percentage of the measure to the total of the respective instrument.

Based on a detailed meta-analytical review of the first four dimensions (individualism-collectivism, power distance, uncertainty avoidance, masculinity-femininity) 589 studies totalling over 200000 individuals (Taras, Kirkman, & Steel, 2010) conclude that-

1. At the individual level of analysis, the cultural values predict outcomes with similar strength (with an overall absolute weighted effect size of $p=0.18$).
2. For certain outcomes like job performance, absenteeism, and turnover, the predictive power of the cultural values is significantly lower than that of personality traits and demographics. But the predictive power is significantly higher for certain other outcomes like organizational commitment, identification, citizenship behaviour, team-related attitudes, and feedback seeking.
3. Most strong relationship of cultural values is observed for emotions, followed by attitudes, behaviours and job performance in that order.
4. Stronger relationship of cultural values is found in the case of managers compared to students, older, male and more educated individuals.
5. Stronger findings are obtained for primary, rather than secondary data.
6. According to the concept of Gelfand, Nishii and Raver's (2006- as cited by Taras et al 2010) of societal tightness-looseness, significantly stronger effects are found in the case of culturally tighter, rather than looser, countries.

Taras, Steel and Kirkman (2012) use a meta-analysis of 451 empirical studies covering more than 2000 samples from 49 countries and regions to refine Hofstede's cultural dimension scores. The authors observe changes from Hofstede scores 1980 with respect to certain countries like Eastern Europe and South American countries. They were earlier reported as high power distance-collectivist countries. Now these have changed into lower scores power distance and higher scores individualism especially in 1990 and 2000. On the other hand, countries such as US, Canada, and Germany, have changed into lower individualism and higher on power distance. Different types of validity analyses have been done to check the validity of the method and the results obtained.

In a study on Hofstede, cultural dimensions of Russia, Naumov and Puffer (2000) use a 29-item questionnaire containing five dimensions of national culture (power distance, individualism-collectivism, uncertainty avoidance, paternalism, and masculinity-femininity)

based on Hofstede. Paternalism is not among the six dimensions of Hofstede. The justification for inclusion of this item is inadequate. Survey responses of 250 Russians are used. The participants are from managers, professionals, students and faculty members of business schools. Responses for each item are converted to 100 –point scale to compare with the results of other studies. The authors do not give the actual survey instrument in this paper.

Fiske (2002) argues that small differences in scales or samples produce significantly divergent results. The author discusses the following limitations of research on individualism-collectivism. The concepts and methods treat nations as cultures and cultures as continuous variables. It inflates all types of social relationships and distinct autonomies. Contextual specificity in norms and values are ignored. It measures culture as individual preferences and behaviour. It rarely establishes external validity of the measures. It assumes no variance in self-reports, anchoring, and interpretation of scales. It reduces culture to an abstract verbal knowledge.

An individual-based inventory to assess individualism versus collectivism for four social relationships, Individualism-Collectivism Interpersonal Assessment Inventory (ICIAD) was developed and its validity and reliability were established by Matsumoto, Weissman, Preston, Brown and Kupperbusch (1997) using five studies and its utility using a sixth study. In this study, although the survey is used, it is used for measurement of individual attributes rather than organisational culture.

From the above discussions, it is clear that questionnaire survey method and interviews are the main methods used for measuring cultural dimensions. As many as 121 cultures measuring instruments have been used by various authors. Use of any of them or any new instrument in future research depends on the research context.

One such context is the educational context. Within this context, various learning environments exist. Some of these are English as a Foreign Language (EFL) and English as a Second Language (ESL), in the classroom and out of the classroom (distance, SDL, e-learning, mobile or m-learning). Methodological issues related to various learning environments are discussed below.

Methodological Issues in Educational Context General

From a survey on 103 Introduction to Human Development class US university students, VonDras (2005) obtains the relationship of individualism-collectivism with learning barriers and self-efficacy of performance ratings. Although there is cultural mix among the students, about 85% of the participants are Caucasians. This might tilt the mean response towards their cultural characteristics of individualism-collectivism. The authors do not estimate correlations between the ethnic groups and their individualism-collectivism ratings. So, this effect is unknown. The sample size is too low for the validity of the findings.

Dekker and Fischer (2008) use the theory of societal level value structure proposed by Schwartz (2006) as the framework, for a meta-analysis of cultural dimensions of academic motivation goals. The terms autonomous and embedded societies can be equated to individualistic and collectivist societies of Hofstede. From the literature search, a net sample size of 36985 students from 13 societies is obtained. Mastery goals are higher in egalitarian (individualistic) societies. Performance approach goals are higher in embedded (collectivist)

societies. Meta-analytical studies appear to be more useful than limited researches with respect to the strength of evidence.

In a master thesis, Heijkant, Jørgensen, Printzipa and Lagas (2007) study the individual beliefs of students on Power Distance (PD) and their perception about their teachers. The work is done in a US school and a Hungarian school. Individual beliefs are stressed. Data is collected using a Questionnaire on Teacher Interaction (QTI) and a Power Distance Questionnaire (PDQ). The PDQ is constructed for the specific purpose of this study, and its reliability is tested. The results do not show any relationship between individual students' beliefs about PD and how they perceived their teachers.

The theoretical model used by Badri, Amani-Saribaglou, Ahrari, Jahadi and Mahmoudi (2014) in their studies on the effect of cultural dimensions on school culture, motivation and academic achievement of students is based on self-determination theory. The population consisted of 1852 students (924 male and 928 female) from 14 boys' and eight girls' schools of Azerbaijan province in The North-west of Iran. Out of this cohort, 296 (159 female and 137 male) participate in the survey. To measure the cultural dimensions, a questionnaire from Sadeghi et al. (2013) is used with suitable modifications to adapt it from a teacher perspective to a student perspective. Femininity, uncertainty avoidance collectivism, and PD are measured using four items each. No data is given on presence of any international students in the sample. If there is a cultural variation among students, it is not reflected in the data or analysis.

Hagedorn and VenyPurnamasari (2012) add five of Hofstede cultural dimensions - PD, individualism/collectivism, uncertainty avoidance, masculinity/femininity and short term/long term orientation to the PISA data on performance in math, science, and reading. The purpose is to evaluate the effect of cultural differences on academic performance independently or collectively across national cultures. PISA questions also include background and demographics. The 2009 PISA test is related to reading literacy. As they use ready data from PISA scores and Hofstede's publications, there is not much to comment on methodology. They use correlation and regression analyses as would be expected.

In the work of Li and Guo (2012), one novel idea is the comparison of PD between English and non-English teachers using the students' perceptions of their teachers. The PD values of the Chinese staff who teach English courses may be lower due to their exposure to Western culture through the English language. The results validate this assumption. They adapt Hofstede's dimension in a questionnaire suitable to their context. In their questionnaire, PD has 14 items covering five aspects of student's perceptions of the teachers. This procedure of using students to evaluate the teacher's PD might have doubtful validity. The survey is supplemented with observational studies on 26 teachers (14 English and 12 non-English) when they were conducting their classes.

In the study of Yoo (2014), the focus is only on PD in a high PD collectivist Confucian environment: Korean EFL students are taught by a teacher from a low PD individualistic country. This context is a typical setting that can be observed in many EFL or ESL programmes in developing and developed countries. The author herself is the teacher in this study. She is of Korean ethnicity, born and brought up in the low PD individualistic culture of Canada. The paper narrates her teaching experiences with respect to how she adapted and made changes in teaching methods to make EFL more effective. From this point of view, it is not a research paper.

The note prepared by Govea (2007) for an open distance learning programme contains some methodological elements. The two research questions regarding the effect of PD on student-teacher relationships and the consequential effect of these on teaching methodology are considered. The article is a narrative of the problems he encountered when teaching English to Japanese students and solutions he found for them.

The findings of Mahmud (2015) on the power of the students to ask questions in the classroom are discussed above. The author uses 70 undergraduate students of an Indonesian university. The students are given topics for discussions in the class, and their questions are recorded. The 70 students are divided into 12 groups, and each group made a presentation in the class. The students ask questions at the end of each presentation. After these procedures are completed, they respond to an open-ended questionnaire on the types of questions asked by them in each presentation and their perspectives on their questioning powers. The students exhibit the typical behaviour of high PD culture. They are hesitant, afraid, or not confident to ask questions in the classroom. The inequality and respect for, as well as fear of the teacher, are evident.

In their work, Cetin and Dogan (2014) aim at finding the relationship between the professional experience of teachers and the perceptions of the students on their relationship. The influence of these perceptions on the course and the teacher are also studied. The authors present the MTB model of Wubbels and Levy (1993). The study is carried out at four high schools at Ankara, Turkey. The samples consist of 14 EFL teachers and 436 students taught by these teachers. Each teacher administers the Turkish version (developed by Telli, 2006) of a Questionnaire on Teacher Interaction (QTI) developed by Wubbels and Levy (1991) in the class. Its reliability and validity have been proven by many workers. The authors use regression and factor analysis of the data. The study demonstrates the usefulness of QTI in single country contexts.

The work of Winch (2015) provides good methodological details. Learning Japanese in a UK University provides an example of foreign language learning in a single country context. The only other variable is the type of students: whether the students belong to a similar PD levels or varying PD levels. The latter could be true if students of different nationalities studied in the class.

Online, Distance, Virtual Classroom Learning

Koh and Lim (2007) theorise that PD moderated the relationship between educational technology and learning outcomes. The moderating effect is greater in low PD situations compared to high PD situations. The increasing use of educational technology is reflected in universities opening overseas campuses to expand into international markets and the use of the internet and other IT technologies in student-collaborated teaching. In their study, the use of educational technology improves student performances. As the PD was high, they hesitate to seek help from instructors when in difficulty but seek help from peers, especially from those closer to their culture and linguistic background. Some of the problems observed in the participants are related to: absence of a face-to-face instructor to clarify doubts, fear of being misunderstood (due to wrong expression) when messages were sent to instructors to clarify doubts, reluctance to express opinion fearing that their posting would become permanent records and mistakes would be laughed at, and the tendency to stay away from debates or stick to more acceptable answers when controversies arose in discussions. Student learning outcomes may be improved by greater use of technology.

Liu, Liu, Lee and Magjuka (2010), conducted a case study on perceptions of international students of an online MBA programme at a US university. The cultural differences among the online students do not affect their online experiences. Issues like language, use of communication tools, plagiarism, lack of diversity in cases, time zone differences need to be addressed. Instructors should be responsive to the needs of international students. There is a need to support these observations through more extensive survey research.

Employing diversity of course design to address the culturally inclusive learning environments has been suggested. Djojoputro, Nguyen and Peszynski (2005), note from a case study of two fully online subjects that students with high PD and collectivism as their cultural background have difficulties with online courses. This difficulty is explained because most of the online courses would be more suitable for low PD and individualistic cultures. Thus, the needs of students from diverse cultures should be addressed. This finding points to a serious problem of several similar studies, in which course design was not considered when evaluating the effect of online learning.

The influence of Confucian heritage on Chinese students in an online context was investigated by Zhang (2013). Twelve students from the Confucian-heritage countries of mainland China, Hong Kong, and Taiwan are in a study done at a research university in the USA. The author finds that online learning resulted in their improved engagement with their classroom discussions. However, it increases their anxiety during participation. The sample sizes are quite low to validate the conclusions.

Sample participants of 524 students of information science course are surveyed and data are collected by Hornik and Tupchiy (2006) to investigate the effects of horizontal/vertical individualism/collectivism on the horizontal collectivism on the effects of online learning. Too many hypotheses are tested to get simple results, although most of the hypotheses are verified. Horizontal individualism is the only variable which negatively affects actual learning. When this overall effect is observed, the verification of other hypotheses and therefore the model are only of academic interest.

The role of collaborative learning as a method for knowledge sharing has been well-recognised. The nature of such collaborative learning can differ in virtual classrooms. The interactions between students required for this can well be affected by cultural dimensions. The extent to which cultural dimensions influence collaborative learning for knowledge sharing in a virtual classroom setting is studied by Thongprasert and Cross (2008). The sample for a quantitative questionnaire survey consists of 100 Thai students in Thai universities and 100 Thai students in Australian universities. All use ICT for sharing knowledge in their virtual classroom. According to Hofstede's classification, Thailand has high PD, high collectivism, and high uncertainty avoidance. Australia has low levels of all these and collectivism replaced by a high level of individualism. Therefore, Thai students in Thailand should have greater difficulty in knowledge sharing than Thai students in Australia. It is found that to improve knowledge sharing in Thailand, collectivism needs to be increased, and power distance needs to be reduced. Only these two cultural dimensions explain 23.4% of the variation in knowledge sharing. In the case of Thai students in Australia, 57.2% of the variation in knowledge sharing is explained by PD, uncertainty avoidance, and collectivism. Most of the Thai students complete only 1-2 years of Australian residence and hence do not adapt well to the

Australian situation. The low sample size and the low level of percentage variations in the dependent variables explained by independent variables is a serious problem here.

Blended Learning

The impact of culture and learning style on the success of blended learning in the case of employees training in international organisations is studied by Renner, Laumer and Weitzel (2015). The authors define a corporate blended learning environment as a learning environment in which traditional, online and media methods are combined and supported by IT especially for learning management systems. The blend is intended to mitigate weaknesses found in any of the component methods. The authors also define learning style as the learner preferences for any one or more of instructional or other learning methods. The authors use the VARK model of Fleming (2001- as cited by the authors). The VARK model consists of four sensory mode preferences of learning styles: Visual (V), Aural (A), Read/Write (R) and Kinaesthetic (K). Learners can prefer one or more of any of the four modes, thus making several combinations of styles possible. The authors propose hypotheses concerning the effects of learning styles and national cultures. Especially, their hypothesis on PD is that blended learning styles would be more successful in high PD-collectivist cultures than in low PD-individualistic cultures in a strong instructor-centred blended learning environment. The authors test these hypotheses on samples of employees working for an international company in the medical sector. The target group of employees has a continuous need for training and updating their skills in training customers on the product portfolio of the firm. As these employees have different cultural backgrounds and work in various countries of different cultures, their learning styles and experiences can be different. There are 81 respondents to the survey. The authors group the respondents into cultural clusters based on their nationality, as per Hofstede's cultural classification. Clusters 1 and 2 are mainly Western countries with low PD and high individualism. Cluster 3 contains some European countries classified as high PD/individualistic cultures. Cluster 4 includes some Arab and other countries. Cluster 5 has Asian countries. Clusters 4 and 5 are high PD/collectivist cultures. Results reject the hypothesis that success of blended learning depends on different learning styles. Other hypotheses linking national cultures with learning styles are validated.

In another approach to increase the participative learning of 1000 Chinese students in a blended learning environment (250 campus and 750 online students), Shen, Wang and Pan (2008) note that merely providing recorded lectures to online students will only increase the negative effects of passive learning. A cutting-edge mobile learning system is developed for blended learning and tested on the above sample of students. The system broadcasts live lectures in real time. The students can customise content reception and download course materials. They can interact in real time through SMS and instant polls. In the mobile learning (M-learning) system, the teacher can ask questions during live sessions which can be answered by SMS. The results of this pilot study are encouraging as they translate to better learning outcomes for students.

ESL, EFL, L2 Context

Observing that PD can cause misunderstanding in ESL classrooms, Nelson (2000) discusses how the ESL classes in low and high PD cultures can be handled effectively. After reviewing works on how PD influences in learning the English language in Thai contexts, Tananuraksakul (2013) proposes that reducing PD between teachers and students can produce a positive learning environment for English learning and speaking skills. The author uses reinforcement by calling them by nicknames and offering praise in different ways for their every attempt to improve

speaking skills. To some extent, PD reduction and reinforcement strategies induces positive attitudes among students towards teaching and learning English. It also improves their perceptions and beliefs about their English accent. In this study, there is no attempt to quantify the relation between PD and any metrics associated with student learning outcomes.

The relationship between perceived school culture, basic psychological needs, intrinsic motivation and academic achievement is studied by Badri, Amani-Saribaglou, Ahrari, Jahadi and Mahmoudi (2014) using a causal model based on an Iranian sample. Path analysis shows that basic psychological needs and intrinsic motivation have a positive effect on academic achievement. PD and uncertainty avoidance negatively affect basic psychological needs, but femininity influences psychological needs positively. As a fulfilment of basic psychological needs is positively related to academic performance, PD can be regarded as negatively related to academic performance. There is no significant effect of collectivism.

Using a questionnaire survey administered by 14 high school EFL teachers on their 436 students in Turkey, Cetin and Dogan (2014) note that students perceive experienced teachers as more cooperative than fresh teachers. The influence of behaviours by old and new teachers does not differ significantly. The way the students perceived their teachers influences their attitude towards the course and the teacher. It is interesting to note that in a high PD country like Turkey, the EFL teachers assess their style to be low PD one. The opinions of students are not collected in this study to have insights from the students.

In a report on the teaching methodology in a high PD Korean context, after pointing out the characteristics of learning and teaching in high PD contexts in general, Jambor (2005) recommends that ESL teachers try to understand Korean culture and adapt methodology accordingly. The possibility of reducing power distance through suitable methods and reinforcement are not considered. South Korea is a collectivist society with high PD and is high on Confucian influence. The Canadian author uses his ESL teaching experience in a Korean classroom setting. Korea is collectivist due to the long influence of Confucian philosophy. Although students do collective projects, there is a little L2 dialogue among them. A grammar translation method is followed in traditional language classes, but not followed in L2 teaching. Implementing the L2 system is difficult in classrooms familiar only with traditional methods. Interactions among students suffer most due to this drawback.

Experiences of an English Language Teacher (ELT) in Japan in terms of PD are reported in Hadley (2001). One of the major problems is the existence of hierarchical relationships among students. Low PD teaching methods cannot be copied into the high PD classes straight away as other cultural barriers are also present. A strictly stereotyped situation is non-existent. Global influences cause the shift in Japanese educational culture from a high PD type towards lower PD culture. This process results in the presence of elements of both cultures in classrooms. The susceptibility of Japanese classrooms to influences of low PD is higher compared to some other high PD Asian countries. On the other hand, the influence of high PD of native teachers, teaching methods and materials acts as bottlenecks. The author discusses the current tilt towards low PD structure in ELT classrooms with literature support. The author herself adapts her low PD practices to the high PD practices of Japan. She adopts her role as an unthreatening, approachable and authoritative teacher. The participation point system is used to encourage students to interact freely, which is counted for grades. This tactic gives an extrinsic motivation other than the teacher's recognition. Question-answer sessions are set as games to encourage the participation of shy and weak students. Attention to hidden needs and increasing wait times to

get answers are used for encouraging quiet, slow or unresponsive students. Adjusting the grading system and increased approachability for weak students after classes are done to deal with very low-level students. Informal feedback through free expression in their native language helps to refine these methods from time to time.

In China, PD is lower for English college teachers compared to non-English college teachers. The aim of one study by Li & Gou (2012) is to test whether there are differences in PD between the English and non-English teachers based on their different academic majors. Sometimes, the PD of EFL teachers can be lower than the PD of teachers in general. There is no study which provides more information about this and this can be the subject of further research.

In another study on the interaction between students from a collectivist country, South Korea, and an EFL teacher from an individualistic culture, Yoo (2014) notes that reflective teaching and a flexible approach with respect to the context is the best method. Here, the author narrates her sole experience of EFL teaching in the two different cultural contexts, and the authors' conclusions are based on their first-hand experiences. This study also lacks any attempt to quantify the relationship between a PD approach and EFL student learning outcomes.

Student-Teacher Relationships and Communications

Lagas, Heijkant, Printzipa and Jørgensen (2007) conduct a study to measure the relationship between students' individual beliefs on power distance and their perception of teachers by sampling students from schools in the US and Hungary. They find that there is no relationship between individual student beliefs about PD and their perception of teachers. This could mean that students (especially the ones without any international exposure) may be unaware of PD as an influencing factor in their classrooms. They might not have given much thought to the high PD styles used by their teachers as it must be the only approach they have ever seen.

Based on the results of a survey on 1900 Indonesian school students of maths and English, and 55 teachers, Maulanaa, Opendakkera, den Brok and Bosker (2011) report a positive inter-personal relationship of students with their teachers in line with the high PD and collective culture of Indonesia. Conflicts between teachers and students do occur sometimes due to the unequal power relations between them. However, the ultimate control is with teachers due to high PD. Teacher-centred rather than the participative teaching of maths and English also indicates the same cultural pattern. The influence is more dominant than proximity with respect to student motivation. However, the relatively higher rating for drudgery and repression is indicative of some problems in some Indonesian classrooms.

Bjørge (2007) observes that Email communications tend to be more formalised when students from high PD send emails to their teachers. This implies that the high PD culture of the country and classrooms is also reflected in the use of technology by the stakeholders.

In a study on apprehensions of Chinese college students on classroom communications, Zhang (2005) obtains significant positive correlations for student-level PD and student perceptions of tutor humour orientation with classroom communication apprehension. However, multiple regression analysis shows student level PD as the only predictor of classroom communication apprehension. Perceived tutor verbal and non-verbal immediacy has no effect. This implies that any changes in the PD between student and teacher have the potential to bring about a change in classroom communication apprehension. This can possibly lead to better student learning outcomes.

Conclusions

This review indicates many methodological problems with the research works on cultural dimensions in general and in an educational context in particular. Most studies have been on power distance and individualism/collectivism even in educational contexts.

There are a large number of conceptual frameworks and as many as 121 measurement instruments proposed by different authors. The research approaches vary depending on which framework is used for selecting the variables and method of study. Generally, the tendency is to use survey and/or interview methods. In many works, internal consistency or reliability tests have not been done. This raises doubts on their validity. If a parametric distribution has been wrongly assumed, the methods of data analysis could also be wrong.

In surveys, the general tendency is to use about 200-500 participants. In some works, low sample sizes are used. This may affect the validity of the findings. Although resource and time limitations are possible constraints, cross-validation by similar studies by other workers are very limited. Thus, the replicability of the findings is in doubt. In some research works, large groups of scientists across different countries collaborate on a common research programme. Two excellent examples are the GLOBE and the PISA programmes. This should be the norm for such studies in future. Course design is an important aspect when online learning is researched in high PD cultures. Scenario analysis, not used in any reviewed work, may also be a good methodological option.

About the Author:

Abdulaziz Alshahrani is a PhD holder in Applied Linguistics, graduated from the University of Newcastle, Australia. He was admitted to the degree of MA with distinction in Applied Linguistics from the same institution. His works are related to the field of language acquisition and the roles of the social factors. At the moment, he works as an assistant professor at the College of Arts and Humanities, Albaha University, in Saudi Arabia.

References

- Alesina, A., & Giuliano, P. (2015). Culture and Institutions. *Journal of Economic Literature*, 53(4), 898-944. doi:10.1257/jel.53.4.898.
- Badri, R., Amani-Saribaglou, J., Ahrari, G., Jahadi, N., & Mahmoudi, H. (2014). School Culture, Basic Psychological Needs, Intrinsic Motivation and Academic Achievement: Testing a Casual Model. *Mathematics Education Trends and Research*, 13 pp. doi:10.5899/2014/metr-00050.
- Bjørge, A. K. (2007). Power distance in English lingua franca email communication 1. *International Journal of Applied Linguistics*, 17(1), 60-80. doi:10.1111/j.1473-4192.2007.00133.x.
- Cetin, S. E., & Dogan, S. (2014). Teacher-student relationships across teaching careers of Turkish EFL teachers. *Educational Research and Reviews*, 9(20), 1037-1045. doi:10.5897/ERR2014.1840.
- Calori, R., & Sarnin, P. (1991). Corporate culture and economic performance: A French study. *Organization studies*, 12(1), 49-74. doi:10.1177/017084069101200104.
- Dadfar, A., Helander, E., Norberg, R., Schuster, S., & Zufferey, A. (2003). Intercultural aspects of doing business in Saudi Arabia. Linkoping University, Linkoping. Retrieved September 12, 2015, from <http://www.iei.liu.se/indek/utbildning/industriell->

- marknadsforing/teim03/file-archive-2012/1.416547/ExampleofProjectwork-DoingbusinesswithSaudiArabaia.pdf
- Dekker, S., & Fischer, R. (2008). Cultural differences in academic motivation goals: A meta-analysis across 13 societies. *The Journal of Educational Research, 102*(2), 99-110. doi:10.3200/JOER.102.2.99-110.
- Denison, D. R. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics, 13*(2), 5-22. doi:10.1016/0090-2616(84)90015-9.
- Djojoputro, L. P., Nguyen, L., & Peszynski, K. (2005). Cultural Dimensions in Online Learning. Proceedings of the 16th Australasian Conference on Information Systems, 29 Nov – 2 Dec 2005, Sydney (p. 12 pp). Deakin Research Online, Deakin University. Retrieved September 6, 2015, from <https://dro.deakin.edu.au/eserv/DU:30005757/nguyen-culturaldimensions-2005.pdf>.
- Fiske, A. P. (2002). Using individualism and collectivism to compare cultures--A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin, 128*(1), 78-88. doi:10.1037//0033-2909.128.1.78.
- Govea, J. M. (2007). The Cultural Influence of 'Power Distance' in Language Learning. The University of Birmingham, UK. Retrieved August 31, 2015, from <http://www.birmingham.ac.uk/Documents/college-artslaw/cels/essays/language/teaching/GoveaLTMessay.pdf>.
- Hadley, H. (2001). Power distance: Implications for English language teaching. *Niigata studies in foreign languages and cultures, 7*, 45-49. Retrieved September 1, 2015, from <http://ci.nii.ac.jp/naid/110000581175/>.
- Hagedorn, L. S., & VenyPurnamasari, A. (2012). The role of culture in predicting students' achievement: International perspectives. *International Journal of Global Education, 1*(1), 65-73. Retrieved August 31, 2015, from http://www.ijge.net/ijge/v1_i1_article7.pdf.
- Heijkant, K. v., Jørgensen, T., Printzipa, M., & Lagas, D. (2007). Can you feel the distance? A cross-cultural investigation of the relationship between students' individual beliefs on power distance and their perception of teachers. Utrecht University. Retrieved September 11, 2015, from <http://dspace.library.uu.nl/handle/1874/22506>.
- Hofstede, G. (1998). Attitudes, values and organizational culture: Disentangling the concepts. *Organization studies, 19*(3), 477-493. doi:10.1177/017084069801900305.
- Hofstede, G., Neuijen, B., Ohayv, D. D., & Sanders, G. (1990). Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases. *Administrative Science Quarterly, 35*(2), 286-316. Retrieved October 30, 2016, from http://212.71.248.32/misc/Measuring_Organizational_Cultures__A_.pdf.
- Holmes, R. M., Miller, T., Hitt, M. A., & Salmador, M. P. (2013). The interrelationships among informal institutions, formal institutions, and inward foreign direct investment. *Journal of Management, 39*(2), 531-566. doi:10.1177/0149206310393503.
- Hornik, S., & Tupchiy, A. (2006). Culture's impact on technology mediated learning: The role of horizontal and vertical individualism and collectivism. *Journal of Global Information Management, 14*(4), 31-58. doi:10.4018/978-1-60566-138-4.ch012.
- House, R., Mansour, J., Hanges, P., & Dorfman., P. (2002). Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. *Journal of world business, 37*(1), 3-10. doi:10.1016/S1090-9516(01)00069-4.

- Jambor, P. J. (2005). Teaching Methodology in a 'Large Power Distance' Classroom A South Korean Context. Korea University. Retrieved September 2, 2015, from <http://eric.ed.gov/?id=ED508620>.
- Koh, E., & Lim, J. (2007). The Role of Power Distance in Determining the Effectiveness of Educational Technology. 2007 IRMA Conference on Managing Worldwide Operations & Communications with Information Technology (pp. 511-516). Idea Group Inc. Retrieved September 5, 2015, from <http://www.irma-international.org/viewtitle/33124/>.
- 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(1), 221-239. Retrieved August 31, 2015, from <http://web.a.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=10577769&AN=91549986&h=gvyhx4iD1eclMSaf%2fP9UVZd9zstejhBTbk7zrIDSqgh6a5fKTK1P5vGQuOfKezPNqwEjZiXswKWjM4uXtXJzLg%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=Er>.
- Lievens, F., Harris, M. M., Van Keer, E., & Bisqueret, C. (2003). Predicting cross-cultural training performance: The validity of personality, cognitive ability, and dimensions measured by an assessment center and a behavior description interview. *Journal of Applied Psychology*, 88(3), 476-489. doi:10.1037/0021-9010.88.3.476.
- Liu, X., Liu, S., Lee, S.-h., & Magjuka, R. J. (2010). Cultural Differences in Online Learning: International Student Perceptions. *Educational Technology & Society*, 13(3), 177-188. Retrieved September 6, 2015, from http://www.ifets.info/journals/13_3/16.pdf.
- Mahmud, M. (2015). Questioning Powers of the Students in the Class. *Journal of Language Teaching and Research*, 6(1), 111-116. doi:10.17507/jltr.0601.13.
- Maulanaa, R., Opendakera, M.-C., den Brok, P., & Bosker, R. (2011). Teacher-student interpersonal relationships in Indonesia: profiles and importance to student motivation. *Asia Pacific Journal of Education*, 31(1), 33-49. doi:10.1080/02188791.2011.544061.
- Matsumoto, D., Weissman, M. D., Preston, K., Brown, B. R., & Kupperbusch, C. (1997). Context-specific measurement of individualism-collectivism on the individual level the individualism-collectivism interpersonal assessment inventory. *Journal of Cross-Cultural Psychology*, 28(6), 743-767. doi:10.1177/0022022197286006.
- Naumov, A., & Puffer, S. (2000). Measuring Russian culture using Hofstede's dimensions. *Applied psychology*, 49(4), 709-718. doi:10.1111/1464-0597.00041.
- Nelson, G. (2000). Individualism-Collectivism and Power Distance: Applications for the English as a Second Language Classroom. *CATESOL Journal*, 12(1), 73-89. Retrieved September 1, 2015, from http://www.catesoljournal.org/wp-content/uploads/2014/07/CJ12_nelson.pdf.
- Renner, D., Laumer, S., & Weitzel, T. (2015). Blended Learning Success: Cultural and Learning Style Impacts. In T. O., & F. Teuteberg (Ed.), Proceedings der 12. Internationalen Tagung Wirtschaftsinformatik (WI 2015), March 4-6 2015, Osnabrück, Germany (pp. 1375-1390). Otto-Friedrich-University, Bamberg, Germany. Retrieved September 6, 2015, from <http://www.wi2015.uni-osnabrueck.de/Files/WI2015-D-14-00333.pdf>.
- Shen, R., Wang, M., & Pan, X. (2008). Increasing interactivity in blended classrooms through a cutting-edge mobile learning system. *British Journal of Educational Technology*, 39(6), 1073-1086. doi:10.1111/j.1467-8535.2007.00778.x.
- Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative sociology*, 5(2), 137-182. doi:10.1163/156913306778667357.

- Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online readings in Psychology and Culture*, 2(1), 11. doi:10.9707/2307-0919.1116.
- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of cross-cultural psychology*, 32(5), 519-542. doi:10.1177/0022022101032005001.
- Scott, T., Mannion, R., Davies, H., & Marshall, M. (2003). The quantitative measurement of organizational culture in health care: a review of the available instruments. *Health services research*, 38(3), 923-945. doi:10.1111/1475-6773.00154.
- Singelis, T. M., Triandis, H. C., Bhawuk, D. P., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-cultural research*, 29(3), 240-275. doi:10.1177/106939719502900302.
- Soares, A. M., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of business research*, 60(3), 277-284. doi:10.1016/j.jbusres.2006.10.018.
- Tananuraksakul, N. (2013). Power distance reduction and positive reinforcement: EFL learners' confidence and linguistic identity. *International Journal of Language Studies*, 7(1), 103-116. Retrieved September 1, 2015, from <http://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=21574898&AN=83534255&h=Td6B4e3%2fdBy0zuPBtP8kcsKAhc5kHi1hA%2fV4DBWTGTmFaYMTStO2y5w980nKa1rFZYhC1ZUM%2bRoNXYVZjAk8zw%3d%3d&crl=c&resultNs=AdminWebAuth&resultLoca>.
- Taras, V., Kirkman, B. L., & Steel, P. (2010). Examining the impact of Culture's consequences: a three-decade, multilevel, meta-analytic review of Hofstede's cultural value dimensions. *Journal of Applied Psychology*, 95(3), 405. doi:10.1037/a0018938.
- Taras, V., Rowney, J., & Steel, P. (2009). Half a century of measuring culture: Review of approaches, challenges, and limitations based on the analysis of 121 instruments for quantifying culture. *Journal of International Management*, 15(4), 357-373. Retrieved October 31, 2016, from https://www.researchgate.net/profile/Piers_Steel/publication/292276661_Half_a_century_of_measuring_culture_Approaches_challenges_limitations_and_suggestions_based_on_the_analysis_of_112_instruments_for_quantifying_culture/links/56b4f8bf08ae44bb33057465.pdf.
- Taras, V., Steel, P., & Kirkman, B. L. (2012). Improving national cultural indices using a longitudinal meta-analysis of Hofstede's dimensions. *Journal of World Business*, 47(3), 329-341. doi:10.1016/j.jwb.2011.05.001.
- Thongprasert, N., & Cross, J. M. (2008). Cross-Cultural Perspectives of Knowledge Sharing for Different Virtual Classroom Environments: A Case Study of Thai Students in Thai and Australian Universities. Proceedings of the EDU-COM 2008 International Conference. Sustainability in Higher Education: Directions for Change, (pp. 514-525). Edith Cowan University. Retrieved September 5, 2015, from http://www.researchgate.net/profile/Nalinee_Thongprasert/publication/49277449_Cross-Cultural_Perspectives_of_Knowledge_Sharing_for_Different_Virtual_Classroom_Environments_A_Case_Study_of_Thai_Students_in_Thai_and_Australian_Universities/links/5408ff230cf.

- VonDras, D. D. (2005). Influence of individualism-collectivism on learning barriers and self-efficacy of performance ratings in an introductory life-span development course. The annual meeting of the American Psychological Society in Los Angeles (p. 1 pp). University of Wisconsin. Retrieved November 2, 2016, from http://www.uwgb.edu/vondrasd/Learning_Barriers_and_Collectivism.htm.
- Winch, J. (2015). Are International Students' Preferred Pedagogy Influenced by Their Educational Culture? *International Journal of Education & Literacy Studies*, 3(2), 1-6. doi:10.7575/aiac.ijels.v.3n.2p.1.
- Yoo, A. J. (2014). The Effect Hofstede's Cultural Dimensions Have on Student-Teacher Relationships in the Korean Context. *Journal of International Education Research*, 10(2), 171-178. Retrieved August 31, 2015, from <http://www.cluteinstitute.com/ojs/index.php/JIER/article/viewFile/8519/8526>.
- Zhang, Q. (2005). Immediacy, humor, power distance, and classroom communication apprehension in Chinese college classrooms. *Communication Quarterly*, 53(1), 109-124. Doi: 10.1080/01463370500056150.
- Zhang, Y. (2013). Power Distance in Online Learning: Experience of Chinese Learners in U.S. Higher Education. *International Review of Research in Open and Distance learning*, 14(4), 238-254. Retrieved September 5, 2015, from <http://www.irrodl.org/index.php/irrodl/article/view/1557/2633>.