Cultural perceptions of online learning: transnational faculty perspectives

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Abstract

Purpose – The purpose of this paper is to investigate how university academics from three different cultural and linguistic backgrounds perceived their own cultural context and how it influences on online learning.

Design/methodology/approach – The views of 30 faculty members from Sri Lanka, Pakistan and Mauritius who engaged in a six-week professional development online course were gathered through a self-reflection questionnaire, posts on an asynchronous discussion forum and personal self-reflections in journal entries. Content analysis of three asynchronous discussion forums indicated the emergence of categories and themes related to traditional culture and the impact of culture on online learning that were triangulated with questionnaire data and journal entries.

Findings – Cultural perceptions of Sri Lankans and Pakistanis showed similar patterns in their recognition that their cultures exhibit characteristics of high power distance, collectivism and feminine values, while there were no definite dimensional perspectives from the Mauritians. The inability to define their own cultural context using bi-polar dimensions may reflect the sociocultural context of Mauritius. While these frameworks may explain more traditional cultures like those in Sri Lanka and Pakistan, they are unlikely to be useful to define cultural characteristics when the society is diverse, multiethnic, multicultural and multilingual like Mauritius.

Research limitations/implications – This study was based on a small sample of participants from three ethnic origins and cannot be generalized. It has generated questions for further research.

Practical implications – The findings have implications for accounting for culture in designing and delivering online courses.

Originality/value – This study will benefit instructional designers/curriculum designers/teachers to design culturally sensitive and culturally adaptive online courses.

Keywords Online learning, Cross-cultural research, Instructional design, Online tutoring and mentoring

Paper type Research paper

Introduction

Rapid developments in information and communication technology (ICT) have provided access to education and greater flexibility to engage in educational experiences irrespective of physical location. Students are no longer constrained by the

four walls of a classroom, and can now engage in networked learning experiences with peers and academics from around the world. Institutions of higher education have taken advantage of distance education by securing eminent professionals to design and deliver courses across countries and cultures. We have recently seen the birth of massive open online courses that engage thousands of learners across the globe, and academics who are keen to share their knowledge with them.

While distance education has been able to transcend national and geographical boundaries, one of the major challenges educators face today is to determine how to design and deliver online courses that are appropriate and relevant for the sociocultural context of the learners. Rogers *et al*. (2007) have noted that the sheer amount of learning content being developed in the west (defined as Eurocentric, North American, Australasian) and exported via the internet to other countries, highlights the crucial need to explore questions of culture in our online course designs as many students experience "conflict" due to the incompatibility of teaching and learning styles and "professional self" struggles in adjusting to the new learning environment (Pincas, 2001). Carr-Chellman (2005) has argued that designing a single online course, that is available worldwide is efficient, but culturally and contextually bankrupt and that in order to make a product truly marketable globally, it is necessary to homogenize it. "Isn't learning necessarily contextualized in our own cultures and contexts?" (pp. 9-10).

Given this pressing need to understand culture in online course design, it is surprising that only a few researchers have attempted to conduct studies to do so. Researchers have pointed out the dearth of studies on culture and online learning (Uzuner, 2009; Zawacki-Richter, 2009), and call for studies focussing on globalization of education and cross-cultural issues in distance learning (Zawacki-Richter and Anderson, 2014), and empirical studies on the impact of culture on learning (Al-Harthi, 2014). This dearth could be partly due to the difficulties of defining "culture" for the online context, framing questions related to culture, and conducting cross-cultural research studies.

This study took up the challenge to explore culture in distance education research by examining cultural perceptions from the point of view of participants from three countries: Sri Lanka, Pakistan and Mauritius who were enrolled in a faculty development program hereafter referred to as the online tutor and mentor programme (OTMP) offered online by The Open University of Sri Lanka (OUSL). This training program was designed and developed by the current authors and other consultants for the Ministry of Higher Education in Sri Lanka to train academics and other professionals who would teach, tutor and mentor in the online programs to be offered by the National Online Distance Education Service.

Initially, OTMP was designed and conducted as a blended learning program, which included four face-to-face sessions which spread across six weeks, while the predominant portion of the activities was conducted online. OUSL purchased this blended program from the Ministry of Higher Education, updated it, and offered it as an exclusively online program to the participants of this study. This was the first transnational online program offered by the OUSL and facilitated by OUSL faculty and e-mentors from the USA. The program contained 14 online modules in Moodle with diverse learning resources and e-activities comprising of asynchronous and synchronous discussions, reflective journals, quizzes, group projects and peer evaluations.

Objective of the study
The objective of this study was to investigate how academics from three different cultural and linguistic backgrounds (Sri Lanka, Pakistan and Mauritius) perceived their own cultural context, and next, to determine how they think these traditional

cultural values will influence online learning. Many of the participants in the OTMP were new to online learning and many had not previously reflected on their own cultural contexts and programming. Therefore, it was necessary to ask participants to reflect on their traditional culture first, and then determine how traditional culture would influence online learning once they had experienced online learning.

Research questions
The following research questions were formulated to address the above objective:

RQ1. How did participants from three countries perceive their own traditional cultural contexts?

RQ2. How did they perceive the potential influences of traditional culture on online learning?

Definition of culture and conceptual framework
The conceptual framework selected to explore culture in this study had to accommodate how culture would be perceived in the traditional societal contexts by participants as well as how culture would be perceived online. We first explore models that have been utilized to explain traditional culture and then examine definitions of culture for the online learning context.

Culture plays an important role in the way people behave including the way people teach and learn. Cultural differences are generally observed within countries and even within sub-groups of ethnic groups in the same country. These cultural differences are observable through levels of communication such as verbal (words, and language itself), non-verbal (body language, gestures) and customary practices (clothing, gift-giving, protocols). The ways teachers teach and how learners perceive and process information are influenced by culture, and variations are seen across cultures. Differences in learning patterns were observed by undergraduates of eight different countries using the same inventory (Vermunt *et al.*, 2014). In traditional settings these differences can be explicitly observable whereas in a virtual world these differences are not clearly visible even though many culturally diverse people communicate through technology and build "learning cultures" (Goodfellow and Lamy, 2009) by mitigating their cultural differences through "cultural negotiation." Therefore, it is important to understand how participants perceive their own cultural context and how this cultural context would influence negotiation of culture and interaction online.

Previous studies that have examined traditional culture have utilized Hofstede's (1980, 1986) and Hall's (1966, 1976) dimensional frameworks to understand culture. Hofstede (1986) proposed a framework based on his cultural dimensions theory for cross-cultural communication where he describes the effects of a society's culture on the value of its members, and how these values relate to the behavior of individuals. His initial framework proposed four primary dimensions; power distance (PD) – strength of social hierarchy, individualism vs collectivism, uncertainty avoidance (UA) and masculinity vs femininity (task orientation vs person orientation) – Table I. Later on he added two more dimensions to his original framework in two subsequent time frames; long-term orientation and short-term orientation, indulgence vs self-restraint.

While the four dimensions of Hofstede's framework have been used in numerous studies to define cultural variability, there have been several criticisms regarding the validity and limitations of Hofstede's framework (Ailon, 2008; McSweeney, 2002) indicating that it lacked a theoretical foundation, the sample was not representative across all national cultures, and the views of sub-cultures were not represented.

Dimensions	Descriptions
Power distance (PD)	The degree to which people accept the unequal distribution of power and wealth in a society. In countries with high PD, individuals with high social status exert great power and influence (Gunawardena *et al.*, 2001)
Individualism-collectivism	The tendency of members of a society to act as individuals or members of groups, and to which a culture values individual vs collective achievement or well-being (Mercado *et al.*, 2004)
Uncertainty avoidance (UA)	The degree to which the individuals of a culture feel threatened by uncertain or unknown situations. Individuals from a culture with high UA are uneasy with unstructured ideas and situations (Hofstede, 1986)
Masculinity-femininity	The degree to which the society prefers distinct gender roles (Hofstede, 1986; Mercado *et al.*, 2004)

Source: Liu *et al.* (2010, p. 178), reproduced with permission

Table I.
Hofstede's
four-dimension
cultural model

After reviewing several studies that have utilized and critiqued Hofstede's dimensions, Daniels and Greguras (2014) state that "Hofstede's (1980) taxonomy is arguably the most well-known, referenced, and adopted cultural value taxonomy in the organizational sciences" (p. 1203). Given that Hofstede's framework relates to culture at the national level, and our study population consisted of participants from three national cultures, we decided to adopt his dimensional framework in Table I to seek participant perceptions on their own traditional cultural context.

In addition to the national differences identified by Hofstede (1980), Hall (1966, 1976) stated that cultures could be differentiated along a dimension of contextualization. He distinguished between high-context and low-context cultures based on the amount of information, that is implied vs stated directly in a communication message. High-context cultures depend upon the contextual clues delivered through indirect verbal messages in order to extrapolate meaning. Low-context cultures, on the other hand, obtain meaning from the information provided by the explicit code of the message itself. This difference in an individual's need for context is especially important when communicating via a text-based online environment. Those from low-context cultures like the USA will be able to obtain information from the code of the text itself while those from high-context societies like Sri Lanka and Pakistan will need the context to understand the message. Hall's (1966, 1976) conceptualization of high- and low-context communication styles and implied indirect (high-context) and direct (low-context) communication styles, was useful for conceptualizing cultural differences in communication in the context of this study.

While Hofstede's (1980) and Hall's (1966; 1976) frameworks are useful for conceptualizing traditional cultures, they may not be appropriate for studying culture on the internet. Gunawardena (2014) noted the deficiencies of static description of whole cultures such as those developed by Hofstede (1980) and argued for a change from an essentialist to a negotiated perspective, to conceptualize culture as being negotiated within an online course. This perspective of culture as negotiated is similar to Hall's definition of culture as communication "Culture is communication and communication is culture" (Hall and Hall, 1990, p. 186). Raffaghelli and Richieri (2012, pp. 102-103) note that "Networked learning should emphasize Bruner's idea about education as forum where culture is not transmitted but generated through interaction" leading to new learning cultures.

This study employed both the traditional frameworks of Hofstede (1980) and Hall (1966, 1976) for understanding traditional cultural context, and the emerging thinking on culture as negotiated online, for conceptualizing internet and online culture.

Methods

This research was designed as an exploratory mixed methods study utilizing both quantitative and qualitative research methods. There were three types of data sources. First, initially, participants (Sri Lankans, Pakistanis and Mauritians) completed a self-reflection questionnaire on their own cultural context at the beginning of the module on "Cultural issues related to Learning and Communication." The questionnaire used consisted of 29 close-ended questions with a four-point Likert scale where participants had to indicate whether they "Strongly Disagreed, Disagreed, Agreed or Strongly Agreed" to a given statement about their own culture based on Hofstede's (1980) and Hall's (1966, 1976) frameworks. The responses were analyzed using descriptive statistics. Second, next, participants engaged in an online group forum discussion where they engaged in discussing their own culture and how it would influence online learning. The responses were analyzed using qualitative content analysis. Finally, participants wrote their personal reflections on culture in their private online journals which were also analyzed using qualitative content analysis. Thus, the three data sources and analysis included the online questionnaire, computer transcripts of three separate discussion forums on cultural context for each national group and transcripts of self-reflections in online journals.

Descriptive analysis of the responses to the self-reflection questionnaire was used to understand cultural factors and how these factors impacted online learning from the perspective of the three different cultural groups. Content analysis of three asynchronous discussion forums where participants discussed culture indicated the emergence of categories and themes related to traditional culture and the impact of culture on online learning that were triangulated with questionnaire data.

Results and discussion

Profile of respondents

There were 30 professionals registered for this online program; nine from Pakistan, ten from Mauritius and 11 from Sri Lanka. They were mostly academics from national universities. In this sample 17 were females. Age ranged between 25 and 61 years, with the majority in 25-29 years age group. Only ten were successful in completing this program; one was certified as a master trainer and the remaining nine were certified as online tutors. Out of these ten successful completers, eight were females including the participant certified as a master trainer. Only 15 completed the online questionnaire. Thus, the response rate for the questionnaire was 50 percent.

Perceptions on traditional cultural context

According to the results obtained from the self-reflection questionnaire, all participants from Pakistan (100 percent) and the majority of Sri Lankans (88 percent) had the opinion that their countries exhibit high power distance where they believe that there is unequal distribution of power. In contrast, only 25 percent Mauritians confirmed their agreement on high power distance. This finding may reflect the sociocultural context of Mauritius, a more egalitarian society. Mauritius is multiethnic, multireligious, multicultural and multilingual even though it is considered predominantly Asian. The government is modeled on the British Parliamentary System, and the country is highly ranked for democracy and for economic and political freedom.

Asynchronous forum posts also illuminated that high power distance was very prominent in the Sri Lankan culture as exemplified below:

I was thinking of the aspect of power distance mentioned in your list, and thought of it in relation to that found in Sri Lankan society, don't you think that it is still plays a dominant part in most institutions? In fact, some professors, and senior lecturers would be quite offended if students and junior staff do not use their titles. So though we have moved away from our traditional culture in some aspects, I feel that power distance is strongly entrenched in our society (Sri Lankan academic, Female-1).

All Sri Lankan participants and 75 percent Mauritians felt their students are less likely to challenge the ideas of their teachers. In contrast only 33 percent Pakistanis were in agreement. Marambe *et al.* (2012) also reported that respect, passive listening and not criticizing or challenging one's own teachers were prevalent in Sri Lankan culture. A similar finding was reported with Chinese students by Biggs and Watkins (1996), stating that students in Eastern countries are not encouraged to question or challenge their teacher's knowledge and that the supreme authority lies entirely with teachers. In contrast, discussions with teachers and challenging their ideas are encouraged greatly in western countries as they are considered an essential component of the self-development process of the learner (Robinson, 1999) and speaking one's mind is highly valued (Hofstede *et al.*, 2010).

The majority of Sri Lankan (75 percent) and Pakistani (67 percent) participants indicated that their cultures are collectivistic where people share and aim for group goals rather than fulfilling individual goals. Contrastingly, only 25 percent of the participants from Mauritius viewed their country as a collectivist country. The following quotation from one Sri Lankan supports the view that Sri Lanka is a collectivist country; however, she feels that it is slowly moving toward an individualistic society:

It is true that Sri Lanka is a collectivist country but I observe this is becoming less during past decades and we step forward towards individualistic society with weak relations among others. However we still have collectivists culture in our families. Before 1970's we had a strong collectivistic culture, where people were connected through strong and cohesive groups. As a consequence the society was safe. There the elders, weak and disabled people were cared by such social structure. As an example, in earlier villages at North central province, the middle part of "chena" is for widows of that village (Sri Lankan academic, Female-2).

The following quotation was from one of the participants from Pakistan:

[…] since the time is moving and we have entered into technological world, the values are also changing with the changing world. lots of innovations have come into our culture, for example; our national dress is shalwar and qameez, but now jeans with qameez/kurta is going to be common in young girls; so we are also catching the germs of other cultures also (Pakistani academic, Female-1).

Both these quotations from participants confirmed that culture never remains static and is dynamic and ever changing, often influenced by the socio-economic changes in the country. The tremendous advancement of new technologies may also influence and accelerate the process of this transformational change in culture, and may also pose a "threat of loss of cultural identity" in the face of globalization (Parrish and Linder-VanBerschot, 2010).

In contrast, Mauritians seem to be more liberal in their thinking and the following quotation clearly illustrates the "openness" and "freedom" experienced by the people in Mauritius:

Mauritian culture is based on the diversity of the population, that's why there is no "official religion" in Mauritius. Hindus, Tamils, Muslims, Christians, Buddhists and others from all over

the globe live in harmony and respect the free practice of all religions in Mauritius. The ancestral melting-pot that is Mauritian culture allows different faith communities to cohabit in mutual respect. Mauritius is an island of temples, churches and mosques (Mauritian academic, Male-1).

The findings present this interesting contrast between Mauritius, a more open and free society, compared to Sri Lanka and Pakistan which are more traditional societies.

Regarding uncertainty avoidance, the majority of Sri Lankans (63 percent) felt that people in the country are able to function well in ambiguous/uncertain environments whereas only 33 percent of Pakistanis were in agreement and Mauritians were equally split in their judgment. This may be attributed to individual differences rather than to a national cultural dimension.

All the Pakistanis and 63 percent of Sri Lankans felt that their country is a feminine culture whereas Mauritians were equally split (50 percent) in their opinion. Only 33 percent of Pakistanis and 25 percent of Mauritians felt that there are opportunities for women to hold higher positions in an organization clearly indicating a demarcation with respect to gender even though they believed that their country is a feminine culture. This was so for Pakistanis in particular. This gender demarcation was not so pronounced in Sri Lankan culture, where 88 percent of Sri Lankans felt that there are opportunities for females to hold higher positions if they wish to. This may be because the Sri Lankan culture has given prominence to gender equality over the past few years where females are treated equally, respected and provided the same legal rights and opportunities for career upliftment. For instance in 1931 voting rights were granted to both females and males under the British rule. In 1960, Mrs Srimavo Bandaranaike became the first democratically elected woman Prime Minster in the world.

Findings revealed that both Sri Lankans and Pakistanis were similar in the way they perceived their culture with respect to power distance, collectivistic values and feminine nature of their societies supporting the cultural dimensions of Hofstede's framework, exhibiting preference for family, values and taking collective responsibilities for others. In contrast, Mauritians show a blend of these cultural dimensions and are less likely to fit into conceptualizations of culture in Hofstede's framework.

Regarding Hall's (1966, 1976) contextual communication, all Pakistanis and 75 percent of Sri Lankans felt that their people have to know the context to understand the message and most of them do not communicate the message directly in words. In this instance too, Mauritians were equally split in their opinion. Figure 1 illustrates the comparisons of Hofstede's (1980) and Hall's (1966, 1976) cultural dimensions across three countries.
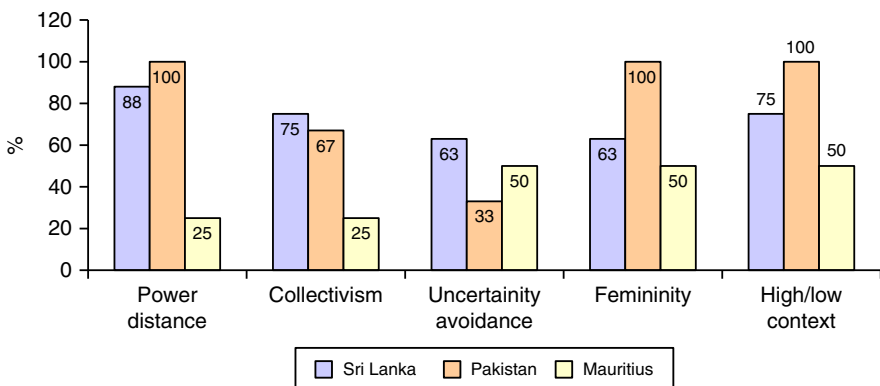

Figure 1.
Comparison of cultural dimensions based on Hofstede's and Hall's frameworks

Perceptions on the influence of culture in designing online courses
The majority (75 percent Mauritians, 67 percent Pakistanis and 62 percent Sri Lankans) were in agreement that their students would not adapt to an unstructured online course. Even Ku and Lohr (2003) found that Chinese and Taiwanese students were perturbed with the non-linear nature of their online courses. Furthermore, the observations of this current study were in agreement with Hofstede's (1986) results, and confirmed that not only in Eastern Asian countries but also in South Asian countries that do not have a Confucian heritage, participants were uneasy with unstructured ideas and course designs, and showed signs of high uncertainty avoidance.

Leeds (2014), revealed that learners experienced a temporal culture shock during their first experience with e-learning and moved from an intentional monochromic approach (doing one thing at a time) to a polychromic (doing more than one thing at a time or in parallel) as they progressed toward the course resulting in anxiety for learners as none of them had identified themselves as extreme polychrons. Even most of the participants in this study had difficulty becoming "polychrons" – doing many tasks at the same time, and preferred to be assigned one task at a time. This finding highlights the importance of considering individual and organizational perspectives of time or "temporal cultures" when designing and delivering online courses.

The majority of participants (100 percent Pakistanis and Mauritians, and 88 percent Sri Lankans) confirmed that students in collectivist cultures are more likely to work together in groups. Findings reported earlier revealed that the majority of Sri Lankans and Pakistanis indicated that they belonged to a collectivist culture. Thus, incorporation of group work into online courses may benefit the participants of these two cultures This view was also supported by Liu *et al.* (2010) indicating the preference for group work by Eastern students; however mixed opinions were expressed with respect to group work as some found it challenging to reach consensus in online group work (Zhao and McDougall, 2008).

In all, 88 percent of Sri Lankans, 75 percent Mauritians and 67 percent Pakistanis stated that the people in their countries have a flexible and fluid attitude toward time and they take it easy when it comes to meeting deadlines.

The following quotation was extracted from the personal journal entries of one of the Sri Lankan participants highlighting the importance of knowing about culture, reflecting on the malpractices of one's own culture and stressing the need to change for the betterment of the society:

> Truly, our culture determines how we think and act. So understanding the culture is necessary to know why we are acting in a way. It will help to improve or modify our thinking and behaviour. Say for example if our culture doesn't value for time, we, growing up in such culture don't value time. As it is not an acceptable behaviour we should change it (Journal entry, Sri Lankan academic, Female-3).

When the participants were asked directly about the deadlines given for online assignments, all the Mauritians agreed that their students would complete the assignments on time while only 88 percent of Sri Lankans and 33 percent of Pakistanis were in agreement. They felt that their students were more likely to find excuses for not completing them on time.

All participants from Sri Lanka and Mauritius and 67 percent from Pakistan felt that people who communicate online should provide the context so that learners

can easily understand the message. This implies the importance of integrating context to the understanding of the message communicated in online courses. Figure 2 shows the comparison of cultural preferences for certain elements in online courses.

Perceptions on the influence of culture in online communication
When the participants were asked to give their opinion on the influence of traditional culture on online learning, the majority of the participants from Mauritius (75 percent) and Sri Lanka (63 percent) felt that the power difference between teachers and learners may influence the way they participate and engage in online interactions whereas only 33 percent of Pakistanis were in agreement.

All the participants across these three countries felt that their students will show respect for their teachers by addressing teachers with their titles. They firmly believed that knowing a person's title will impact the type of communication that they may have with him/her indicating the influence of high power distance in these countries. However, 100 percent Mauritians felt that online communication will breakdown power barriers that exist in society but Sri Lankans (88 percent) and Pakistanis (67 percent) were less affirmative indicating that participants would be less willing to change immediately.

There was an interesting observation where Sri Lankans felt that they were less likely to challenge the ideas expressed by their peers (88 percent) in order to maintain harmony in an online environment in contrast to Pakistanis (33 percent) and Mauritians (25 percent). All Sri Lankan participants felt that opposing ideas online and disagreements with ideas were generally taken at the personal level rather than at the level of ideas. This observation was less evident in the other two countries (50 percent Mauritius and 33 percent Pakistan). Similar findings were observed in a study conducted with Sri Lankan e-mentees and American e-mentors in a case-based learning activity where Sri Lankan participants hardly opposed the views expressed by their peers and teachers in the online environment (Gunawardena *et al.*, 2013). A similar observation was reported with Chinese students where they were less critical of ideas expressed by their peers and tended to hold on to their opinions in online discussions than their US counterparts (Thompson and Ku, 2005), and were reluctant to challenge the instructor's ideas (Zhao and McDougall, 2008).
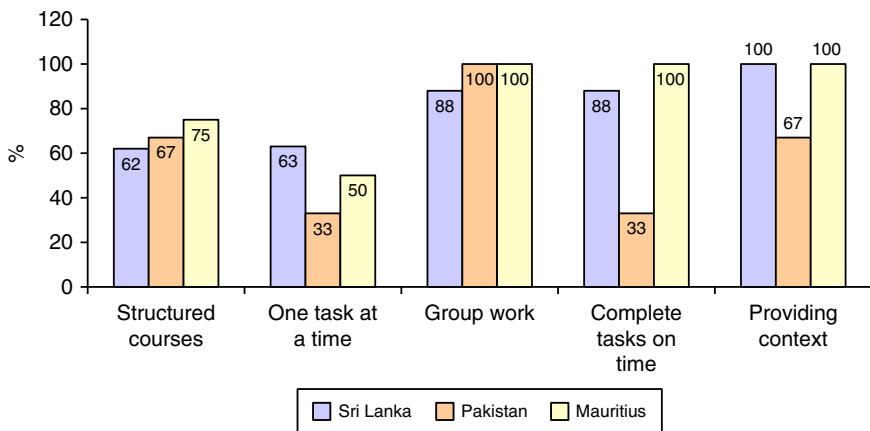

Figure 2.
Comparison of cultural preferences for certain elements in online courses

In total, 75 percent of both Sri Lankans and Mauritians and 67 percent Pakistanis agreed that it is easier to communicate via text in an online discussion. However, 67 percent Pakistanis and 63 percent Sri Lankans felt that they are used to extracting meaning from indirect messages and may not have difficulties deciphering meaning. Definite conclusions could not be reached from the results from Mauritius as the results were equally split (50 percent) in both dimensions.

Participants had different opinions with respect to gender and online communication. All Mauritians and 67 percent Pakistanis believed that differences in gender will not have any drastic impact whereas Sri Lankans were equally split (50 percent) on this aspect on online learning.

Tendencies of collectivism, uncertainty avoidance and high power distance were observed among participants when engaging in online learning environments in Eastern cultures (Kim and Bonk, 2002; Ku and Lohr, 2003; Wang, 2007) imply that the participants bring their own traditional cultural practices into online learning environments as well, especially when communicating with others.

Perceptions of second language learners on the impact of English in online courses
Almost all participants felt that people in their countries tend to be more tolerant of misunderstandings caused by mistakes in English language made by those who are not proficient in the language (100 percent Pakistanis and Mauritians, 88 percent Sri Lankans). One Sri Lankan was not in agreement and further analysis revealed that he is an English teacher. Individual differences were also identified between the two Sri Lankan English teachers; one was not in agreement and the other was more tolerant about the mistakes made by learners. This implies the influence of personality traits in the learned culture as pointed out by Hofstede and Hofstede (2005).

Difficulty in participating actively and contributing equally in computer conferences were reported due to inadequate language competencies among non-native speakers (Gunawardena *et al.*, 2001). However, designing culturally appropriate instructional strategies may overcome the challenges faced by non-native speakers such as incorporation of synchronous voice over internet protocol (VoIP) to increase language competency (Barrett, 2014).

Parrish and Linder-VanBerschot (2010), stressed the importance of providing culturally sensitive communication as one of the strategies to overcome cross-cultural challenges, along with increased awareness, modified instructional design processes and efforts to accommodate the most critical cultural differences.

Conclusions, significance and recommendations
One of the main findings of this study is the distinction between the three cultural groups: Sri Lankans, Pakistanis and Mauritians in the way they perceived their own cultural contexts. Similar patterns were observed in the cultural perceptions of the majority of Sri Lankans and Pakistanis who agreed that their cultures exhibit characteristics of high power distance, collectivism and feminine values supporting the cultural dimensions put forward in Hofstede's (1980) framework. However, there were no definite dimensional perspectives from the Mauritians regarding power distance, collectivism, uncertainty avoidance or feminine vs masculine values. The inability to define their own cultural context using bi-polar dimensions may reflect the sociocultural context of Mauritius, a multiethnic, multireligious, multicultural, multilingual and more egalitarian society. Therefore, Hofstede's framework was not

directly applicable to Mauritian national culture. This brings up a question regarding the general applicability of dimensional frameworks to define national culture. While these frameworks may explain more traditional cultures like those in Sri Lanka and Pakistan, they are unlikely to be useful to define cultural characteristics when the society is diverse, multiethnic, multicultural and multilingual like Mauritius. Since culture re-invents itself and changes over time often to develop into a hybrid culture, we can question the applicability of applying dimensional frameworks to study cultures at the national level.

With respect to Hall's low-high context dimension we made a similar observation. Sri Lankans and Pakistanis reported similar patterns and felt that they belong to a high-context society (100 percent Pakistanis and 75 percent Sri Lankans). In contrast, Mauritians were equally split between the low- and high-context dimensions. This may be due to the blending of different cultures and communication styles in Mauritius and the influence of both French and English. Mauritians may be more open and liberal in their perception of cultural values due to the association with many cultural, ethnic and religious groups over centuries unlike in Sri Lanka and Pakistan where cultural identity associated with language and religion plays a very important role in the lives of the people. Mauritius has "no official religion."

These findings indicate that Mauritian culture which made up of great diversity in the population may not fit neatly within Hofstede's and Hall's dimensions of cultural variability. It would be interesting to conduct a more in-depth study with a larger sample in Mauritius to determine how a diverse population conceptualizes its cultural identity and how this would influence communication in the online context.

This study has shown that even though ICT has the potential to cross national and geographical boundaries and converge participants in a virtual environment permitting greater flexibility in offering transnational programs, it is still crucial to examine the cultural frameworks and expectations students and teachers bring with them in order to build inclusive online learning environments. In this study, a majority of participants from Sri Lanka and Pakistan indicated that the distribution of power in their traditional culture will influence how they communicate online, even though all Mauritians felt that online communication will breakdown power barriers that exist in society. Therefore, while accommodating cultural perceptions that would influence online communication it is also important to determine how online communication can bypass these traditional barriers to communication to provide more equitable learning environments.

While the results of this exploratory study cannot be generalized because of the small sample size, it points to the need to understand a learner's culture more thoroughly and sheds light on how culture influences online learning.

We offer the following recommendations for designing culturally sensitive online courses based on our findings and perceptions of our study participants related to how culture influences online learning:

- design well-structured and linear-sequenced online courses than a non-linear-sequenced online courses for those who prefer teacher led content-driven models;

- incorporate group work with clear guidelines and constant moderation by the teacher;

- include instructional strategies to address linguistic difficulties such as through VoIP;

- design for frequent teacher's presence;

- provide direct guidance and feedback for those who need teacher direction;

- encourage high-context communication where participants are instructed to provide the context for their messages; and

- develop an equitable learning environment so all participants feel comfortable sharing their thoughts and opinions.

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