

# Cultural Inclusiveness in Online Learning: Can Educational Technology Be a Solution?

Hwangji Lu

**Abstract**—Combined with the advances in information and communications technology, online learning has become a vital component of the U. S. higher education. One-size-fit-all teaching methodology can no longer meet the needs of diverse students that possess various culture heritages. A carefully instructional design is needed to address cultural differences among students. Several strategies of culturally appropriate online teaching are discussed. The integration of educational technologies into course design and content delivery can enhance students' learning experiences and outcomes by creating a more dynamic learning environment. This paper concludes that the use of multiple modes of media demonstrates the institutions' and instructors' sensitivity to cultural inclusiveness.

**Index Terms**—Computer-mediated communication, culture preferences, learning styles, online education.

## I. INTRODUCTION

The advancement of communication and Internet technology has transformed the landscape of higher education in the United States. As the technology pervades educational institutions, it is now possible to create flexible online learning environments without barriers in time and distance [1]. As a mediation tool between the learner and his/her knowledge, the online learning system makes it possible for those adult learners who cannot study on campus because they live at a distance and/or have other work, family, and social commitments. Adult learners can find the balance between their learning goals and busy lifestyles [1], [2]. The web-based online learning system is a critical factor that is reshaping teaching and learning in the U.S. higher education.

Distance learning courses and programs have become an indispensable part of higher education in the United States [2], [3]. Even though the overall enrollments have declined in the past few years, the enrollments in distance learning have grown every year. According to the data from the U.S. Department of Education's National Center for Education Statistics, in the Fall 2014 term, 14% of all higher education students enrolled exclusively in distance learning courses; 14% took some distance learning courses but not all; and 28% enrolled at least one course [4].

The growth of cultural concerns about online learning has drawn the institutions' and educators' attention because of the growing numbers of international students and diverse American students from various cultural and ethnical backgrounds. This paper will explore the impact of cultural

differences on teaching and learning in the U.S. online classrooms. The arrangement of this paper is as follows. First, the introduction highlights the importance and impact of web-based online learning in the U.S. higher education. Second, this paper will review the changes in student demographic profiles. Third, the literature review will portray two major theoretical frameworks in examining culture. Fourth, a survey of past research studies concerning the topic of cultural differences in the online learning environment will be presented. The fifth and final section will discuss the best practices and solutions derived from the review of the literature and the author's years of experience in the online education.

## II. THE CHANGING FACES OF THE U.S. EDUCATIONAL INSTITUTIONS

### A. Domestic Student Population

As the U.S. Census Bureau rerecorded, the number of U.S. native and foreign-born Asian residents rose 56% from 2000 to 2013 while Hispanics grew 53% and African-Americans increased by 15% during the same period [5]. Regarding the total number of population, Hispanics increased from 35 million in 2000 to 54 million in 2013—a 19 million increase. The Asian population grew 5.8 million from 10.2 million in 2000 to 16.0 million in 2013. Among Asians, China was ranked as the highest number of the origin, at roughly 24%, according to the 2013 American Community Survey [6]. The second largest number, at about 20%, was the Indian subcontinent, including India, Bangladesh, Pakistan, and Sri Lanka. The African-American population added 5.3 million between 2000 and 2013 despite the fact that the African-American population was about 3.5 times the Asian population [5].

The U.S. Census Bureau forecasted a similar trend would continue for years to come. Between 2013 and 2050, the Asian population (one-race) is anticipated to grow to a population of 34.3 million with an increased rate of 115%; the Hispanic population is predicted to rise to 101 million at a growth rate of 88%; and African-American population, with a mild growth rate at 40%, would reach 16 million by 2050 [7]. A decline in the white population has been observed and will continue as a trend. It is foreseeable that the percentage of American college students who are African-American, American Indian/ Alaska Native, Asian/Pacific Islander, and Hispanic will have been increasing as the proportion of Caucasian-White students will have been reducing.

### B. International Student Population

Moreover, in the 2014-15 academic year, the total number

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Hwangji Lu is with Ashford University, USA (e-mail: hwangji.lu@Ashford.edu).

of international students enrolled in U.S. colleges and universities was 974,926, a 10% increase from the previous year, which marks the highest growth rate in 35 years [8]. International students mainly come from China (31.2%), India (13.6%), and South Korea (6.5%).

The change of student demographics in U.S. higher education provides the impetus for educators to cognize the learning style preferences of learners from different culture backgrounds. Cultures differ across ethnic groups, and learning can be strongly influenced by cultural perspectives [9]. It is of utmost importance for educators and institutions to understand how culture impacts learning in the online environment and how cultural differences should be taken into consideration in course design and delivery [9], [10].

### III. THEORETICAL FRAMEWORK IN CULTURE

Culture can influence learner's expectations, perceptions, and experiences [2]. There are some different schemes to categorize culture. In this paper, the literature review specifically focuses on Hofstede's Cultural Dimensions and Hall's Cultural Classification.

#### *A. Hofstede's Culture Dimensions*

Cultural dimensions theory, developed by Dr. Geert Hofstede, is a framework widely used for cross-cultural psychology research and has also been drawn upon by researchers in many fields relating to communication and education. Because of people with different cultures, the cultural dimensions theory describes the effects of society's culture on its members' values and the relationship between these values and behaviors [11]. Such values affect how people in a community think, act, and judge others. The original theory described four cultural dimensions: Power Distance, Uncertainty Avoidance, Individualism versus Collectivism, and Masculinity versus Femininity [11], [12]. After an independent research in Hong Kong, Hofstede added the fifth dimension, Long Term Orientation to encompass the aspects that were not discussed in the original paradigm [10], [13].

- 1) Power Distance refers to the degree to which people accept and expect the unequal distribution of authority and influence in a society [11]. In high power distance cultures, people accept a hierarchical order, while in low power distance cultures, people attempt to equalize the distribution of power and demand justification for inequalities of power [2], [9], [13]. Individuals from high power distance cultures prefer to have subject matter experts disseminate training materials, and they feel a sense of obligation to learn from such experts [3].
- 2) Uncertainty Avoidance is the degree to which the individuals of a culture feel uncomfortable by uncertain, unpredictable, or unstructured situations [11], [12]. Individuals from high uncertainty-avoidance cultures feel threatened with unstructured situations [10]. On the other hand, people from low uncertainty-avoidance cultures are perceived as relaxed, unemotional, and risk-taking [3]. Thus, learners from high uncertainty-avoidance cultures prefer structured training approaches with definite learning outcomes that will

reduce the uncertainty in the training process [9], [10].

- 3) Individualism versus Collectivism is defined as the tendency of members in society to act as individuals or members of groups, and to which a culture values individual versus collective achievement or well-being [11]. In collectivist cultures, people exhibit a strong focus on group harmony, are likely to work toward a common goal, and tend to concentrate on the needs and concerns of the group over their personal needs [9], [11]. In contrast, individualistic cultures reflect an emphasis on self-growth and the independence of the individuals [11], [12]. People are expected to take greater initiative as well as work independently. Collectivist cultures prefer a deductive training style, while individualistic cultures favor an inductive training style [3].
- 4) Masculinity versus Femininity refers to the degree to which the society differentiates between the social roles for men and women [11], [12]. The masculinity cultures represent a preference in society for achievement, assertiveness, competitiveness, heroism, and material rewards for success [9]. In femininity cultures, people prefer to cooperate and care for the weak and quality of life [10].
- 5) Long- versus Short- Term Orientation is regarded as putting particular emphasis on future values for example perseverance and thrift [13]. In contrast, short-term orientation focuses on past and present virtues—especially respect for tradition, realizing social duties, and protecting 'face' [9], [13].

#### *B. Hall's Culture Classification*

In his 1976 book *Beyond Culture*, anthropologist Edward T. Hall propositioned high- and low-context cultures and helped us better understand the impact of culture on communication [14]. A key factor in his theory is the context which relates to the background, framework, and surrounding circumstances in which communication takes place. In other words, cultures influence how we view communication with others.

In high-context societies, people have close connections with each other over an extended period. Many aspects of cultural behavior are not made explicit because most members know what to do and what to think from years of interaction with each other [14], [15]. People from the high context culture are likely to be collectivists and prefer group harmony and consensus. They use less verbally explicit as well as written/formal communication to convey meaning [9]. The communication style tends to be more indirect and formal, depending on more internalized understandings of what is communicated. Thus, actual words are not so important as contexts or non-verbal cues, which consist of the speaker's facial expression, gestures, posture, and tone of voice [9]. Long term relationships, group harmony, and firm boundaries are characters of high context cultures [3].

In Low-context cultures, beliefs, cultural behavior, and issues are fully spelled out precisely and explicitly, so that everyone, including those who are new to the societies, knows how to behave [14], [15]. Individuals from low-context cultures value logic, facts, and directness. To be clear and understood, they strive to be direct, open and use

precise words taken literally [9]. They are also inclined to explain things further to accommodate individuals with a wide variety of backgrounds [9].

A summary of the relationship between Hofstede's cultural dimension theory/Hall's cultural classification and country origins is listed in Table 1 [3], [9], [11], [14].

TABLE I: THE CULTURAL PERSPECTIVES AND COUNTRY ORIGINS

Framework	North America & Western Europe	Asia (China, Korea, India) & South America
<i>Hofstede's Culture Dimensions</i>		
Power Distance	Low	High
Uncertainty Avoidance	Low	High
Individualism versus Collectivism	Individualism	Collectivism
Masculinity versus Femininity	Masculinity	Femininity
Long- versus Short Term Orientation	Short-term	Long-term
<i>Hall's Cultural Classifications</i>		
Low- or High- Context	Low	High

#### IV. A SURVEY OF PAST RESEARCH STUDIES

For more than two decades, the subject of online cross-cultural communication and web usability has gained distinct attention among researchers who have a vested interest in either computer-mediated communication (CMC) or human-computer interaction. The computer is the mediator in person-to-person communication while individuals are the receivers, senders, and processors of information who are constantly influenced by a complex blend of cultural context, psychology, and sociology [9], [16].

Using a qualitative study, Tu examined Chinese students' views on the bulletin board, email, real-time chat, and three CMC learning systems in a Southwest University in the United States [16]. With a focus on the importance of social context in Chinese culture, this study mainly investigated how Chinese students interacted with peers and instructors in the CMC learning systems that lack non-linguistic cues. The findings revealed that Chinese students were at ease and more willing to respond to their peers' friendly messages—especially when they had to disagree their peers' points of view. Despite the fact that the face-to-face contacts and non-verbal cues were absent in the CMC learning systems, Chinese students felt comfortable since the systems provided the time and opportunities for them to manipulate their images, which Tu ascribed to one of the most notable Chinese attributes, face-saving. Therefore, Tu recommended that educators should consider students' cultural backgrounds and the use of paralinguistic when designing and facilitating the online courses [16].

In a qualitative study, Thompson and Ku interviewed seven Chinese international graduate students about their online learning experiences in an American university [17]. As Thompson and Ku concluded, Chinese students were less opinionated in online discussion than their US peers. In need of longer time to reflect before responding to questions, Chinese students felt more comfortable expressing themselves in the online discussion boards, which confirms

the findings of Tu's study. Chinese students experienced frustrations when they did not obtain an instant response from their instructor—especially the lack of face-to-face communication in the asynchronous classrooms [17]. Similarly, a combined qualitative and quantitative research study carried out by Yang and colleagues highlighted the differences between the collectivism of Chinese culture and the individualism of American culture [18]. Instead of asking questions, Chinese students often endorsed their instructor's and peers' views in the discussion boards. In contrast, American students raised more questions and discussed their views with their peers. Chinese students valued the vast importance of the harmonious atmosphere and relationship maintained in the online learning. To avoid conflicts, Chinese students tended to exhibit indirect expressions although they did not concur with their peers. On the other hand, American students, focusing on the learning activities, took a direct approach to expressing their different opinions from their peers.

Zhang devised a qualitative study in which she specifically examined how the cultural dimension, power distance, influenced Chinese learners' interactions with instructors and peers in the online classroom of a research university located in the Southwestern United States [2]. This study also evidenced that the online setting benefited Chinese learner's engagement in class discussion, but the level of anxiety was high in their participation. In Chinese students' views, instructors are authorities with great power and the primary sources of knowledge. Consequently, Chinese learners were intimidated to interact with their instructors. Rather, they had the propensity to ask help from peers—especially those who shared similar cultural and linguistic backgrounds.

Lim investigated the distinctions in students' motivation between Korean and American students in the online learning [19]. Ninety-five undergraduate and graduate students in Korean universities and 141 undergraduate and graduate students in American universities were surveyed. American students were disposed to voice their personal opinions, enjoyed online learning, and had a sense of belonging. Korean students indicated that they attempted to avoid speaking up their opinions, kept quiet and passive in the online classroom as the authoritarian context of Asian culture influences their behaviors and motivation. Lim's study validated that cultural orientation affects students' learning motivation in the online education [19]. A similar study by Gunawardena, Nolla, Wilson, Lopez-Islas, Ramirez-Angel, and Rosa utilized survey and focus group interviews to explore the difference in perceptions of online group process and development between Mexican and American students [20]. The results showed that students' cultural identities strongly affected their online learning behaviors. Compared to their American peers, Mexican students demonstrated a higher tendency for affection, compassion, and emotion in online group process [20].

Using an online questionnaire, Wang surveyed students' perceptions of online teamwork, motivations to participate in online discussion, and comfortableness in approaching their instructor among American, Chinese, and Korean students [21]. Similar to the results from other research studies [2] [16]-[20], cultural heritages significantly influenced

student's participation and perception of online schoolwork. Course requirement was the sole motive behind Chinese and Korean students to participate in online discussions while American students enjoyed connecting with their peers. Sharing the same cultural traits, Chinese and Korean students preferred the asynchronous communication because they could take time searching and reflecting the topic of discussion meticulously before "speaking up." Unlike their peers, Korean students felt distressing with online collaborative work. Wang's study also disclosed that American students were more likely to communicate with their instructors while Chinese and Korean students, on account of the embodiment of power distance, didn't have the comfortableness in approaching their professors [21].

Lee, Becker, and Nobre inquired the effects of natural culture on students' perception of personal innovativeness, online interaction readiness, and usefulness of online learning management system among Korean and American students who enrolled in management courses [3]. As the results demonstrated, Korean students with high-context and collectivist cultures were more conservative to adopt online management education and engaged in the online interaction with their peers. It is evident that cultures directly shape the way that learners engage, relate, and benefit from the online courses.

A quantitative research study was accomplished by Holtbrügge and Mohr to examine the relationship between cultural values and the learning style preferences of business administration students [10]. A questionnaire was distributed to universities in China, Germany, Poland, Russia, the Netherlands, the United Arab Emirates, U.K., and U.S.A. The findings from 939 individuals reported that there were statistically significant influences of individualism and masculinity on individuals' learning style preferences. This cross-cultural study concluded that individuals from different cultural backgrounds had different learning style preferences, and the one-size-fits-all teaching approach might not be helpful to students to achieve the desired learning outcomes [10].

#### V. SOLUTIONS TO CONTAIN VARYING CULTURAL TRAITS AND LEARNING STYLES IN THE ONLINE SETTING

Online courses, as McLoughlin and Olive argued, should be developed to accommodate a diverse student population who has particular culture traits and different learning styles [22]. Educators should adopt an inclusive curriculum and change teaching practices to enhance learning outcomes by encouraging respect for different values and approaches to learning and providing a range of flexible learning options to meet students' needs [9].

##### A. Course Design

Often, online classroom is built around asynchronous discussion board that is oriented toward individualistic and low-context cultures. However, different learning styles and culture orientation may prefer other modes of interaction [9]. The lack of nonverbal dimension is a negative aspect of online learning systems. People frequently complain about the impersonality of online communication [3], [16]. Notably,

the likelihood of miscommunication occurs when different cultural communication patterns exist among learners; the greater the insensitivity of cultural differences, the greater the possibility of miscommunication [18]. A culturally inclusive course design ensures that pedagogy and curriculum are adaptable, flexible, and relevant to learners from a mixed range of cultural backgrounds [9].

A sensible instructional design should be able to overcome cultural differences since course design can influence modes of communication, styles of learning, and participation [9]. For example, a built-in cyber café provides a space for students to converse and discuss any topics of interest with their peers beyond the prescribed discussion boards. As stated by the interviews in Yang et al.'s study, Chinese students favored such a social lounge in the online classrooms to have a deeper conversation with their peers and get to know them better, which is hard to fulfill in the formal discussion boards where the knowledge and ideas are shared [18]. American students also voiced that the social lounge allowed them to gain more prior knowledge of their peers' cultures and backgrounds before collaborative learning started.

The infusion of multimedia into education has significantly impacted how educators teach, and students learn. In response to the technological revolution, educational institutions have renovated the learning process and embedded student-centered learning approach with the integration of technology into course design. Salazar contended that the use of educational technology in a pedagogically sound curriculum can be a powerful arrangement to successfully engage students online [23]. A wide variety of technologies offers multiple interaction modes, which would appeal to students from various cultures [24]. The incorporation of multimedia into course design and content delivery creates a more efficient and dynamic learning environment that permits students with a variety of cultural inclinations and learning styles to learn effectively.

##### B. Course Facilitation

Instructors play a critical role in preparing students to engage in cross-cultural classroom conversation structurally, and increase in cultural sensitivity remains a leading goal for students involved [18], [25]. A culturally inclusive instructing approach encourages instructors to consider diversity in all teaching processes [9]. Instructors should be aware of culture's influence on the collaborative online learning process [16], [18], providing scaffolding to the diverse students to support their learning adventure and reduce cultural barriers [18].

The culturally appropriate online teaching is, indeed, derived from social constructivist views of learning [25]. The notion of a learning community is to create an environment for cultural inclusiveness that emphasizes on learning as social and interactive, involving interchange of ideas, shared inquiry and peer learning, and collaborative dialogue [9], [18], [25]. Through collectivist-femininity attributes of the Eastern culture, Asian students support the idea of building an online community among their peers and instructors [18]. Technologies can serve to bring people together as a community and create contexts where cultural

awareness and understanding are developed by the newly formed community. One of the approaches to building a strong sense of community is that the instructor and students may create an introductory video outlining personal and professional experiences. It will help establish the relationships between and among the instructor and students by gaining more of the feeling of personal touch even before the learning takes place. The best practice of student-centered instruction also encourages instructors to build the rapport with students as early as possible [23]. Additionally, an effective online instructor could use video conferencing with a face to face interaction as a form of learning to foster the learning community [25]. Speece argued that the use of conferencing technologies to build a learning community is one of the best practices demonstrating the instructor's high degree of sensitivity to cultural inclusiveness [9].

Online learning is complex. Learners require not only technological tools to facilitate learning, but also cultural, motivational, pedagogical, psychological, and social support from their instructors. Social interaction with others is central to the learning process [16]. Social implies how well individual students are participating and collaborating with their peers and instructor. Social skills, individual accountability, and positive interdependence are the central facets of collaborative learning [18], and yet learning process is supposedly shifting from teacher-centered to student-centered [24]. Nevertheless, instructors remain the primary "source of knowledge" to Asian students and other students having similar cultural traits, so that they do not feel comfortable to interact with their instructors. They are still unable to confront new challenges and take the responsibility for their learning achievements [24]. The role of an effective online instructor is to encourage students to work in groups to appreciate diverse views and challenge each other's perspective to stimulate debate and critical analysis of ideas [25]. Furthermore, it is also crucial that the instructor inspires students to move beyond passive recipients of course content to active, dynamic participants who engage in communication and reflection [25]. By encouraging students to communicate with each other, exchange ideas, and share knowledge in a way that promotes cross-cultural understanding, instructors can develop a team spirit and improve students' abilities to function in a multicultural society [24].

The purely asynchronous online modes, with interaction based on written discussion board, is a format attractive mainly to students from individualistic and low-context cultures. Text-based communication of an asynchronous discussion is unable to convey the nuances of human interaction, and high-context students are more likely to feel dissatisfied with the lack of social relationships in such a learning environment [9]. Furthermore, because of the uncertainty avoidance dimension of Asian cultures, Asian students felt unpleasant with the nonlinear nature of their online courses [3]. Audio-visual technology as a medium provides much more intimate human interactions along with non-verbal cues, similar to the face-to-face for high-context students [9]. For instance, instead of asking students to post their written response on the discussion board, the instructor could offer an option for the students to create a video or

multimedia presentation. This option also works well in a group debate assignment, e. g. debates in organizational politics, as multimedia productions mimic the atmosphere of a traditional on-campus classroom.

The dominant teaching practice in Asian societies is a one-way lecture in which the teachers instruct while the students take notes. The teachers are the primary source of knowledge, and the students rely on the most important points recapped from their teachers. An effective online instructor can take advantage of synchronous conferencing communication tools such as Adobe Connect, Blackboard Collaborate, Citrix GoToMeeting, JoinNet, or WebEx to host office hours, give the lecture, and provide explicit guidance and helpful tips for completing the assignments. Asian students who prefer to have more structured directions from their teachers will benefit from the synchronous communication tools. Undoubtedly, such tools allow for much more non-verbal content and context upon which communication in high-context cultures depends on [9].

The best solution seems to be a platform that is asynchronous with the capacity for engaging in synchronous interaction via multiple modes for learners who find it useful [9]. A single technology or medium rarely meets all educational needs. It is the combination of different media technologies that gives technology its strength in teaching and learning. Thus, apart from audio-video conferencing technology and the learning management systems, instructors can also employ e-mail, blogs, listserv, instant message, Internet communication means e. g. LINE and Skype, and social media platforms, such as Facebook and Twitter, to enhance instructor's social presence [24]. Tu asserted that instructors ought to scrutinize the available strategies and utilize the communication technologies to increase their intimacy and social presence so as to accommodate a broad range of culture preferences and learning styles among learners [16].

## VI. CONCLUSION

Since the information and communications technology has evolved in a startling speed, the U.S. higher education has changed concerning teaching and learning methodologies and student population correspondingly. The online courses are in high demand. The student-centered instruction is emerging. The need for the contemporary curriculum that acknowledges and values cultural differences is imperative. The adoption of appropriate pedagogies and awareness is necessary for the online learning environment. We need pedagogies that create the learning communities in which students learn from each other, and the collaborative online learning results in the synthesis of knowledge from multiple perspectives [25]. This article has presented an overview of the theoretical framework, past research studies, and the strategies of adopting educational technology to enhance students' online learning experience that is culturally responsiveness. To position the online courses and programs in the vanguard of today's educational world, the institutions necessitate to support all-inclusiveness of instructional design and equip their faculty with a new set of skills and competencies that promote student-centered instruction and

cultural inclusiveness throughout the utilization of multiple educational technologies.

#### REFERENCES

- [1] C. Keller, J. Lindh, S. Hrastinski, I. Casanovas, and G. Fernandez, "The impact of national culture on e-learning implementation: a comparative study of an Argentinean and a Swedish university," *Educational Medical International*, vol. 46, no. 1, pp. 67-80, March 2009.
- [2] J. Y. Zhang, "Power distance in online learning: Experience of Chinese learners in U.S. higher education," *The International Review of Research in Open and Distance Learning*, vol. 14, no. 4, pp. 238-254, Oct 2013.
- [3] J. W. Lee, B. Kip, and H. Nobre, "Impact of culture on line management education," *Cross Cultural Management*, vol.19, no. 3, 300-420, 2012.
- [4] R. Poulin and T. Straut. (2016). WCET distance education enrollment report 2016. [Online]. Available <http://wcet.wiche.edu/sites/default/files/WCETDistanceEducationEnrollmentReport2016.pdf>
- [5] D. T. Cohen. (March 2015). Population trends in incorporated places: 2000 to 2013 (Report No. P25-1142). [Online]. Available <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1142.pdf>
- [6] D. T. Cohen. (March 2015). Population trends in incorporated places: 2000 to 2013 (Report No. P25-1142). *U.S. Census Bureau* [Online]. Available <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1142.pdf>
- [7] S. L. Colby, and J. M. Ortman. (March 2015). Projections of the size and composition of the U.S. population: 2014 to 2060 (Report No. P25-1143). *U.S. Census Bureau* [Online]. Available <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf>
- [8] Institute of International Education, Inc. (2016) *Open doors 2015. Report on international educational exchange. Institute of International Education, Inc* [Online]. Available <http://www.iie.org/Research-and-Publications/Publications-and-Reports/IIE-Bookstore/Open-Doors-2015#.VxLMPnpQZS0>
- [9] M. Speece, "Learning style, culture and delivery mode in online distance education", *US-China Education Review*, A 1, pp. 1-12, 2012.
- [10] D. Holtbrügge, and A. T. Mohr, "Cultural determinants of learning style preferences," *Academy of Management Learning and Education*, vol. 9, no. 4, pp. 622-637, 2010.
- [11] G. Hofstede, and M. H. Bond, "Hofstede's culture dimensions. An independent validation using Rokeach's value survey," *Journal of Cross-Cultural Psychology*, vol. 15, no. 4, pp. 417-433, 1984. doi: 10.1177/0022002184015004003
- [12] G. Hofstede, "Cultural differences in teaching and learning," *International Journal of Intercultural Relations*, vol. 10, no. 3, pp. 301-320, 1986.
- [13] M. Minkov and G. Hofstede, "Hofstede's fifth dimension, new evidence from the world values survey," *Journal of Cross-Cultural Psychology*, vol. 43, no. 1, pp. 3-14, 2010.
- [14] E. T. Hall, *Beyond Culture*, New York, NY: Doubleday, 1976, pp. 105-116.
- [15] E. T. Hall, "Context and meaning," in *Intercultural Communication: A Reader*, 9th ed., L. A. Samovar, and R. E. Porter, Eds. Belmont, CA: Wadsworth, 2000, pp. 34-43.
- [16] C. Tu, "How Chinese perceive social presence: An examination of interaction in online learning environment," *Educational Media International*, vol. 38, no. 1, pp. 45-60, 2001.
- [17] L. Thompson and H. Ku, "Chinese graduate students' experiences and attitudes toward online learning," *Educational Media International*, vol. 42, no. 1, pp. 33-47, 2005.
- [18] J. Yang, H. Yu, S. Chen, and R. Huang, "Strategies for smooth and effective cross cultural online collaborative learning," *Learning Educational Technology and Society*, vol.17, no. 3, pp. 208-221, 2014.
- [19] D. H. Lim, "Cross cultural differences in online learning motivation," *Educational Media International*, vol. 41, no. 2, pp. 163-175, 2004.
- [20] C. N. Gunawardena, A. C. Nolla, P. L. Wilson, J. R. Lopez-Islas, N. Ramirez-Angel, and R. M. Megchun-Alpizar, "A cross-cultural study of group process and development in online conferences," *Distance Education*, vol. 22, no. 1, pp. 85-121, 2001.
- [21] M. Wang, "Designing online courses that effectively engage learners from diverse cultural backgrounds," *British Journal of Educational Technology*, vol. 38, no. 2, pp. 294-311, 2007.
- [22] C. McLoughlin and R. Oliver, "Designing learning environments for cultural inclusivity: A case study of indigenous online learning at tertiary level," *Australian Journal of Educational Technology*, vol. 16, no.1, pp. 58-72, 2000.
- [23] J. Salazar, "Staying connected: Online education engagement and retention using educational technology tools," *Clinical Laboratory Science*, vol. 23, no. 3, pp. 53-58, 2010.
- [24] A. Istrate, "Intercultural dimensions and their implications in the development of online courses targeted at teacher-centered cultures," presented at the 11<sup>th</sup> International Scientific Conference eLearning and Software for Education, Bucharest, April 23-24, 2015.
- [25] X. Liu, S. Liu, S. Lee, and R. J. Magjuka, "Cultural differences in online learning: International student perceptions," *Journal of Educational Technology & Society*, vol. 13, no. 3, pp. 177-188, 2010.

**Hwangji S. Lu** holds two masters in nutrition from North Dakota State University in Fargo ND and health services administration from Center Michigan University in Mount Pleasant MI of the USA. She earned her Ph.D. in management with a specialization in leadership and organizational change from Walden University in Minneapolis, MN.

Currently, she is a remote assistant professor in the master's program of healthcare administration at Ashford University located in San Diego, CA. Apart from Ashford University, she has taught online courses at some universities since 2006. Before this post, she had over 20 years of professional experiences in various industries—inside and outside the healthcare arena. Her research interests include leadership development and using innovated technology in the online education.

Dr. Lu is a member of professional societies such as Academy of Management, Southern Management Association, Multimedia Educational Resource for Learning and Online Teaching, and International Economics Development and Research Center. Dr. Lu was awarded as a 2008 Outstanding Reviewer by the Academy of Management Health Care Management Division. Dr. Lu was named as the recipients of Provost's Circle Award at a couple of universities in 2009 and 2010.