



Cultural Influences on Service Quality Expectation: Evidence from Mongolian Higher Education

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Abstract— Universities' goal in the twenty-first century is threefold: knowledge generation, utilization, and sharing. In education, students are clients who pay to interact with institutions in order to gain knowledge and skills. To boost national competitiveness, university education should be the primary system for training and equipping people to be highly skilled, creative, inventive, and professional. As a result, assessing the quality of education services becomes critical. The study topic in this context will be how to adequately quantify service quality while taking cultural factors into account. This research will employ SERVQUAL and HOFSTEDE dimensions to explore the two concepts of service quality and culture because they are the most widely used models in their industry. The key research issue based on this problem is how culture effects service quality in a certain service context and how service quality expectations fluctuate across different types of service contexts and cultures. With the rise of online education caused by the covid19 pandemic, students from different countries and diverse cultural backgrounds seek to learn from university or instructors located in other parts of the world. These university and instructors need to understand learners' cultural differences to provide quality education services. This makes the link between culture and service quality expectation of utmost importance. In the case of education context, Power distance has a stronger correlation with reliability and assurance. The following conclusions can be drawn from this: Mongolia has a high "power distance" culture, therefore, in the field of Mongolian education, graduates are trained to be skilled professionals, as well as job security and demand for graduates is important.

Keywords— *SERVQUAL and Hofstede' cultural dimensions, power distance, Uncertainty Avoidance, uncertainty avoidance, collectivism, and long-term orientation*

I. INTRODUCTION

All throughout the world, higher education institutions are under pressure to become more competitive. Such strive for excellence may be linked to and perceived as a result of globalization, which is driving the remaking of higher education. In this current era of globalization and

internationalization, culture has become an important component for service providers to understand how their clients perceive and evaluate the quality of their services. Other scholars who have investigated similar difficulties in recent years include Donthu and Yoo, Furrer, Liu, Mattila and others. Each of them has helped to shed light on the vital link between culture and service quality cognition, which is critical for managers all over the world to properly understand their consumers. [1, 2, 3].

Due to culture and service quality's complex complicated nature and the participation of multiple stakeholders, research in this topic requires a comprehensive view and study to gain a better knowledge of consumers' expectations regarding service quality, especially when customers come from all over the world with diverse backgrounds and cultures.

II. RELATIONSHIP BETWEEN CULTURE AND SERVICE QUALITY EXPECTATION

Many studies have shown evidence that culture has a substantial impact on consumers' views of service experiences. According to Winsted's research, clients in various nations assess service quality differently [4]. Because of their strong status consciousness and group orientation, Japanese customers valued friendliness, promptness, being personable, and authenticity more than Americans. According to empirical research, South Korean customers do not voice their unhappiness directly, but instead engage in private behaviors such as stop, exit, or poor word-of-mouth. This is a common reaction in collectivist society, when people strive to avoid bad feelings in public in order to maintain face and group unity [5].

Furthermore, due to the universality and popularity of Hofstede's cultural dimensions, numerous research has been conducted to evaluate and analyze the link between culture and service quality, particularly utilizing the SERVQUAL scale. As an example, Donthu and Yoo investigated the impact of power distance, uncertainty avoidance, collectivism, and long-term orientation on bank customers' service quality

expectations. Masculinity was not examined since it is thought to have a weak relationship with service expectations. Their research revealed the following link between Hofstede's dimension and SERVQUAL's dimension:

- Responsiveness and reliability are inversely related to power distance.
- Uncertainty Avoidance is positively related to Tangibles.
- Individualism is positively related to Empathy and Assurance.

Mattila investigated the impact of culture on the appraisal of services in luxury hotels using Hofstede's dimensions [3]. She related three service aspects: physical environment, significance of hedonism, and personal service using two Hofstede dimensions of power distance and individualism. Even though these dimensions are not identical to the five SERVQUAL dimensions, the study gives some additional insight into perceived service quality, particularly how the physical environment is connected to tangibles.

Overall, it is clear that culture has a significant impact on customer satisfaction and perceived service quality. To help elucidate this link, the hypotheses for each set of probable relationships between Hofstede's cultural dimensions and the relevance to consumers of SERVQUAL's dimensions will be constructed.

In terms of education

In comparison to other commercial sectors such as restaurants and banks, service quality research in higher education is relatively recent. The majority of the quality models used in this industry are taken from those typically used in business [6]. One of the distinctive characteristics of service is the inseparability of consumption and production. It is certainly true in the context of education, where the outcome of the learning process is determined in part by student engagement in terms of effort, assiduity, or skill. Furthermore, due to various subjective influences, it may become difficult for students to objectively evaluate their own inputs, especially when some people may not want to put up effort yet still desire good results. Furthermore, this expectation may be influenced by other stakeholders such as family, friends, businesses, and so on.

III. THEORIES CONCERNING THE LINK BETWEEN HOFSTED'S DIMENSIONS AND SERVQUAL

Power distance

Donthu and Yoo found that consumers in high power distance cultures had lower expectations for responsiveness and reliability than those in lower power distance cultures [1].

Furrer et al. later shown in 2000 that power distance is negatively correlated with reliability, responsiveness, and empathy, but positively correlated with assurance and tangibles. It means that a high power distance is associated with lower expectations of service staff responsiveness or service excellence and higher expectations of trust, such as concern for privacy and security, as well as tangible service attributes like design, décor artifacts, and other visual appeal to express their value and status.

According to Hofstede et al., one of the most fundamental and typical cultural differences in the dimension of power

distance is the role of the teacher or service provider [7]. As previously stated, in high power distance cultures, the instructor is a "guru," and the class is centered on the teacher. As a result, the outcome of one's learning is greatly dependent on the quality of one's instructor. In contrast, in a low power distance culture, education is student-centered, with students playing a larger role in the classroom and determining their own outcomes. As a result, in this situation, certainty is positively connected with power distance.

Students in the low power distance culture, for example, tend to learn from multiple sources rather than just their teachers, so they require good physical facilities for self-study, whereas in the high power distance culture, the most important for an educational organization is the teacher's prestige, which is a good assurance for student success, rather than a magnificent or state-of-the-art physical environment. As a consequence, the following hypotheses will be proposed:

H1-a. Power distance is negatively correlated with tangibles.

H1-b. Power distance is positively correlated with assurance.

H1-c. Power distance is negatively correlated with responsiveness.

H1-d. Power distance is negatively correlated with reliability.

H1-e. Power distance is negatively correlated with empathy.

Individualism

Consumers from individualistic cultures are unwilling to accept poor service because they are concerned with their own interests rather than the interests of others, whereas collectivist customers will endure poor service in order to maintain unity. Individualist customers demand service quality to be timely and correct the first time, which corresponds to the responsiveness and reliability dimensions [1]. In response to Donthu's argument [1], Furrer also shown that individualism has positive relationship with responsiveness and reliability [2].

Donthu et al. and Furrer et al., on the other hand, have proposed opposing views on the link between the cultural component of individualism and the SERVQUAL dimensions of empathy and assurance [1, 2]. According to Donthu et al., individualistic consumers appreciate assurance and empathy more than collectivist customers [1]. Individualist customers want a service provider to respect and care for them, to demonstrate empathy and personal attention, and to be confident in the services they are receiving. They also offered empirical proof. Individualism, according to Furrer et al., is defined by self-confidence and independence [2].

Individualistic and collectivistic civilizations have different goals for education, according to Hofstede et al. [7]. The former is intended to prepare "the individual for a place in a community of other people" [7]. Students in this type of culture are likewise looking for new challenges and ideas.

As a result, students will need to meet individually with the teachers, and the teachers will need to give attention to each student and educate them in a special manner. Students in collectivist cultures, on the other hand, prefer to remain silent and listen to all of the teacher's statements. The qualities of harmony and keeping a straight face rule supreme. [7].

In reality, I feel that the differences between individuality and collectivism did not communicate clearly whether there

was a need for tangibles or not. In summary, the connections between individualism and SERVQUAL characteristics are comparable in both scenarios. As a result, the theories for the dimension of individualism are as follows.

H2-a. Individualism is not correlated with tangibles.

H2-b. Individualism is negatively correlated with assurance.

H2-c. Individualism is positively correlated with responsiveness.

H2-d. Individualism is positively correlated with reliability.

H2-e. Individualism is positively correlated with empathy.

Masculinity

Furrer et al. only discover substantial connections with responsiveness and tangibles for this cultural factor [2]. Customers want female employees to dress and seem feminine in masculine environments, therefore there is a positive relationship between tangibles and masculinity. Furthermore, according to de Mooji, performance and success are vital in masculine culture. Success leads to happiness [8]. People consume to flaunt their wealth. People in feminine societies, on the other hand, consume for the sake of consumption. Life quality is essential. It is preferable to keep things small and delicate. As a result, it is reasonable to conclude that masculinity is also favorably associated with tangibles. These ideas are relevant in education, where staff uniforms or look, as well as other facilities, equipment, or even the building, can assist represent the high social class that is so vital in masculine culture. In terms of responsiveness, Furrer et al. argued that masculinity is adversely connected with responsiveness since it is expected in masculine cultures that a female employee behaves in a feminine manner in the first place rather than being professional [2]. Customers with a high masculinity score perceive male service professionals to be more professional and responsive in servicing, whereas females expect females to be more compassionate.

However, vocations needing human interaction, regardless of gender, will always insist on feminine ideals, according to Hofstede & Hofstede [9]. Female qualities such as friendliness, compassion, and helpfulness, for example, are always highly valued by both male and female clients, and customers would not anticipate substandard service just because the employee is male or female. Instead, the association between responsiveness and masculinity may be traced back to this dimension's essential qualities.

The urge to compete and accomplish is particularly strong in a masculine culture, and in the service business, what characterizes staff performance the most is client feedback on their responsiveness.

According to Hofstede et al., "on the masculine side, instructors' brilliance and academic reputation, as well as students' academic accomplishment, are the major variables." Teachers' friendliness and social abilities, as well as pupils' social adaption, play a larger role on the feminine side." [7]. As a result, it might be assumed that a masculine culture values confidence whereas a feminine society values empathy. Furthermore, Hofstede et al. stated that students in masculine cultures want to make themselves apparent in class, but "in feminine nations, forceful behavior and attempts at excelling are often criticized" [7, 9]. Empathy is the additional attention demanded by students in a masculine culture.

H3-a. Masculinity is positively correlated with tangibles.

H3-b. Masculinity is positively correlated with assurance.

H3-c. Masculinity is positively correlated with responsiveness.

H3-d. Masculinity is not correlated with reliability.

H3-e. Masculinity is negatively correlated with empathy.

Uncertainty avoidance

As previously stated, uncertainty avoidance refers to the degree to which individuals of a society feel intimidated by uncertain or unknown events. As a result, Furrer et al. proposed that there is a distinction between frequent and infrequent service scenarios [2]. In the paper, healthcare is seen as infrequent, but education is regarded as frequent. In the case of infrequent services, the close relationship with the service provider can help eliminate uncertainty and ambiguity from unknown situations, whereas in frequent situations, the guarantee of quick solutions can help reduce the uncertainty associated with the possibility of service failure [2].

Customers are already aware of the service procedure in frequent services, when tangibles such as personnel appearance and facilities do not add much to their confidence. In purchasing, uncertainty avoidance consumers choose purity or cleanliness, but uncertainty accepting customers prefer convenience above purity, according to Hofstede et al. [7]. In the case of education services, which are often consumed by customers, I believe that convenience, a quality of tangibles, is adversely connected with uncertainty avoidance. As a result, hypotheses will be given as follows:

H4-a: Uncertainty avoidance is negatively correlated with tangibles.

H4-b: Uncertainty avoidance is positively correlated with assurance.

H4-c: Uncertainty avoidance is positively correlated with responsiveness.

H4-d: Uncertainty avoidance is positively correlated with reliability.

H4-e: Uncertainty avoidance is positively correlated with empathy.

Long-term orientation

According to Furrer et al., because long-term relationships with service providers are expected, reliability, responsiveness, and empathy will be critical [2]. Tsoukatos and Rand, on the other hand, assumed that long-term oriented clients are willing to accept somewhat bad service with reasons in order to maintain the connection with their service provider, which accounts for the majority of their attention [10]. It indicates that as long as the service is reliable, they will place little value on responsiveness, assurance, and empathy.

According to Hofstede et al., people from long-term orientation cultures engage in lifetime personal networks or "guanxi" [7]. It suggests that certain aspects of responsiveness, such as providing services on schedule or executing services correctly the first time, can be miscarried and subsequently improved. Short-term oriented cultures, on the other hand, are concerned with the immediate outcome, and hence place a high value on responsiveness. As a result, we anticipate that

long-term orientation will be negatively linked with responsiveness.

As previously said, because the connection with the service provider may continue a long time, assurance is not very vital, and tangibles represented by appealing facilities are also not critical in this type of culture [2]. Short-term oriented clients, on the other hand, see time as a resource, thus they may demand the professionalism of the personnel during "assurance" to ensure that they are selecting a reputable service provider. This dimension may not matter in terms of tangibles in this scenario, both short-term and long-term. Because these reasons are used equally in both instances, my assumptions are as follows:

H5-a: Long-term orientation is not correlated with tangibles.

H5-b: Long-term orientation is negatively correlated with assurance.

H5-c: Long-term orientation is negatively correlated with responsiveness.

H5-d: Long-term orientation is positively correlated with reliability.

H5-e: Long-term orientation is not correlated with empathy.

TABLE I. HYPOTHESED CORRELATIONS BETWEEN CULTURAL AND SERVICE DIMENSIONS

	PDI	IDV	MAS	UAI	LTO
REL	-	+	-	+	+
RES	-	+	+	+	-
ASS	+	-	/	+	-
EMP	-	+	/	+	/
TAN	+	/	+	+	/

IV. METHODS

Following the SERVQUAL dimensions, data is gathered and represented numerically to assist statistical analysis and hypothesis testing. The questionnaire was created in response to previous SERVQUAL research on service-related issues in general and education in particular.

The poll is divided into two sections that ask respondent about culture and their service quality expectations. All of the questions in the two parts were concluded with specified response alternatives. In reality, because the study is attempting to determine the link between culture and service quality expectation, all questions are rating questions that may offer a sufficient degree of favorability or agreement towards the questioned objects for a more meaningful research result.

According to Cooper et al, relational hypothesis is used in conjunction with bivariate correlation analysis to assess the link between two variables [11].

Individual-level cultural values were operationalized using a 20-item scale developed by Furrer et al. that modified Hofstede's work-oriented items of national culture for five dimensions of Individualism, Power Distance, Masculinity, and Long-term orientation (four items for each dimension) [2]. The scale has been proven to have appropriate reliability and validity in evaluating Hofstede's cultural dimensions at the individual level [2]. All items are graded on a five-point

Likert scale, with Strongly Agree = 5 and Strongly Disagree = 1.

The updated 21-item SERVQUAL scale established by Parasuraman et al. is used to quantify the relative relevance of distinct service quality dimensions since it has been widely cited and used to diverse service sectors [12].

Furthermore, this scale has been evaluated for cross-cultural applications with positive findings [13]. This measure includes 21 items on a five-point scale that cover the five elements of service quality expectations (tangibles, reliability, responsiveness, assurance, and empathy). In the study, the type of expectations utilized to measure how relevant a dimension of service quality is to the total expected quality will be the normative.

Pearson's correlation coefficients are utilized with the Statistical Package for the Social Sciences (SPSS) 16.0 to test hypotheses on the links between cultural characteristics and the relevance of service quality variables. Every SERVQUAL dimension is influenced by every cultural dimension. The average of the scores of the elements that operationalize each SERVQUAL dimension. Similarly, each cultural dimension is derived by averaging all of the component items. The confidence level is set at 95% to assess the correlation link between these two variables.

Respondents Demographic Analysis

Descriptive statistics were used to analyze survey participants' demographic traits as well as other nominal-level variables such as age and gender. (Table II).

TABLE II. RESPONDENT'S GENDER AND AGE

Gender	Frequency	Percent
Male	54	33%
Female	111	67%
Total	165	100%
Age	Frequency	Percent
16-17	5	3%
18-25	117	71%
26-30	31	19%
31-40	12	7%
Total	165	100%

V. RESULTS

Factor analysis results

It can be deduced that the 30 quality criteria were properly grouped into the five sub-dimensions of the theoretical framework which was proposed to delineate the service quality construct. The KMO value was found to 0.749, that the sample size was adequate for applying factor analysis. Now I can proceed for Factor Analysis. 0.749 or 74.9% of the respondents provided excellent sample reliability. In the factor analysis of the above questions, the averages are similar, grouping into 5 sets. The results of the survey correctly explain 66.17% (Eigenvalues) of the total sample.

TABLE III. KMO AND BARTLETT'S TEST, SERVQUAL

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.749
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Bartlett's Test of Sphericity	Approx. Chi-Square	1361.210
	df	435
	Sig.	.000

TABLE IV. KMO AND BARTLETT'S TEST, HOFSTEDE

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.817
Bartlett's Test of Sphericity	Approx. Chi-Square	127.396
	df	45
	Sig.	.000

A good indicator for measuring a construct's consistency is Cronbach's alpha. A value above 0.7 indicates that the examined construct has consistency.

TABLE V. CRONBACH'S ALPHA FOR ALL ITEMS

	Cronbach's Alpha	Factor number
REL	.887	4
RES	.886	8
ASS	.888	7
EMP	.888	6
TAN	.892	5
PDI	.895	2
IDV	.897	2
MAS	.902	2
UAI	.896	2
LTO	.902	2

TABLE VI. CORRELATION MATRIX

		PDI	IDV	MAS	UAI	LTO
REL	Pearson Correlation	.321*	.181	.079	.255	-.021
	Sig. (2-tailed)	.017	.185	.565	.061	.882
RES	Pearson Correlation	.191	.165	.118	.116	-.063
	Sig. (2-tailed)	.163	.229	.389	.401	.646
ASS	Pearson Correlation	.280*	.069	-.068	.126	.148
	Sig. (2-tailed)	.038	.614	.621	.359	.282
EMP	Pearson Correlation	.166	.149	.132	.046	.104
	Sig. (2-tailed)	.227	.276	.337	.737	.448
TAN	Pearson Correlation	.084	-.024	.032	-.018	-.027
	Sig. (2-tailed)	.542	.861	.819	.898	.846

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

TABLE VII. CORRELATIONS BETWEEN CULTURAL AND SERVICE DIMENSIONS, HYPOTHESIS AND RESULTS

	PDI		IDV		MAS		UAI		LTO	
	H1	Re sult	H2	Re sult	H3	Re sult	H4	Re sult	H5	Re sult
REL	-	+	+	/	-	/	+	/	+	/
RES	-	/	+	/	+	/	+	/	-	/
ASS	+	+	-	/	/	/	+	/	-	/
EMP	-	/	+	/	/	/	+	/	/	/

TAN	+	/	/	/	+	/	+	/	/	/
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The strength of the correlations in this study will be verbally expressed using Evans' recommendation regarding the strength of the absolute value of r:

- 00-0.19 very weak relationship
- 0.20-0.39 weak relationship
- 0.40-0.59 moderate relationship
- 0.60-0.79 strong relationship
- 0.80-1.0 very strong relationship [14]

After the correlation analysis, power distance does not have any significant correlation with SERVQUAL dimensions except for reliability and assurance in the context of education. Therefore, H1-a, H1-c and H3-e are not supported. However, among these three hypotheses, In term of reliability and assurance, there is a significant correlation between the dimensions and power distance, but with a positive relationship at the level of 0.321 and 0.280 respectively ($p < 0.05$).

VI. CONCLUSIONS

Universities' goal in the twenty-first century is threefold: knowledge generation, utilization, and sharing. In education, students are clients who pay to interact with institutions in order to gain knowledge and skills. To boost national competitiveness, university education should be the primary system for training and equipping people to be highly skilled, creative, inventive, and professional. As a result, assessing the quality of education services becomes critical. The study topic in this context will be how to adequately quantify service quality while taking cultural factors into account. This research will employ SERVQUAL and HOFSTEDE dimensions to explore the two concepts of service quality and culture because they are the most widely used models in their industry. The key research issue based on this problem is how culture effects service quality in a certain service context and how service quality expectations fluctuate across different types of service contexts and cultures. With the rise of online education caused by the covid19 pandemic, students from different countries and diverse cultural backgrounds seek to learn from university or instructors located in other parts of the world. These university and instructors need to understand learners' cultural differences to provide quality education services. This makes the link between culture and service quality expectation of utmost importance.

In the case of education context, Power distance has a stronger correlation with reliability and assurance. The following conclusions can be drawn from this: Mongolia has a high "power distance" culture, therefore, in the field of Mongolian education, graduates are trained to be skilled professionals, as well as job security and demand for graduates is important.

VII. FUTURE RESEARCH

This study contributes to confirming the fact that culture has a considerable influence on service quality expectation of customers. However, this cultural influence will vary across service types, depending on the nature of services. For example, Power Distance correlates with reliability and assurance in the education context, but there is correlation

found between Power Distance and SERVQUAL dimensions in the healthcare context except for tangibles. Thus, it is insufficient to conduct a one-size-fits-all study to approach and identify the relationship between cultural dimensions and service quality dimensions for a service context in general.

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