

Cultures' Consequences in the assessment of Higher Education Service Quality: The Case of CQU, Australia

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Abstract

This study aims to compare students' cultural influence on the assessment of service quality in a higher education context. In particular, this study considered two cultural dimensions, power distance and individualism, and analysed their influences on student perception of service quality in the context of Central Queensland University (CQU), Australia. A random technique was adopted and the survey link was sent to 3000 full-time students of CQU. The response rate was 7.6% with 227 usable responses for data analysis. The findings show that there is no significant difference in academic service quality across cultures. However, students' perceptions about administrative service quality and physical facilities service quality vary across these cultural dimensions. The paper is among the first few to examine the differences of cultures in perceived service quality in a higher education context. Universities attempting to understand the role of culture on student and staff management, and its impact on sustainable existence in the higher education industry and resource allocation could get some useful guidelines from this study.

Key words: Culture, Service Quality, Higher Education, Hofstede's Cultural Dimensions

Introduction

Australian higher education institutions are some of the popular destinations for students. However, the Bradley report published in December 2008 states that there is a clear sign that the quality of the educational experience is declining. One of the significant recommendations of this study emphasises course experience as perceived by the students (Bradley, Noonan, Nugent, & Scales, 2008).

Although the service quality measure in higher education is relatively new, the HEDPERF measure (Abdullah, 2005) and the PHed measure (Sultan & Wong, 2010a) may be considered as comprehensive scales as these measures include a broad range of service attributes in the context of higher education. The HEDPERF measure and the PHed measure were conceptualised on the perception-only (Cronin & Taylor, 1992, 1994) scale. However, there is little evidence as to how one's culture affects service quality assessment in a higher education context. This study is expected to fill the research gap by furnishing empirical evidence. Particularly, the aim of this study is to compare students' cultural influence on the assessment of higher education service quality.

Literature review

Service quality and its dimensions in higher education

Service quality is defined as the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs (Johnson & Winchell, 1988). Perceived service quality is based on one's experience and is a function of attitude (Sultan & Wong, 2010a, 2010b). Service quality has also been viewed as a critical determinant of competitiveness (Lewis, 1989), as a source of lasting competitive advantage through service

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differentiation (Moore, 1987), and as a driver of corporate financial and marketing performance (Buttle, 1996).

The higher education service quality has been the predominant area of research to both academics and practitioners for the last one decade. Sultan and Wong (2010c) demonstrated the service quality dimensions in higher education across various countries and cultures developed between 1997 and 2010. Although there are two major approaches to determine service quality which include the supply-side approach and the demand-side approach (Gatfield, Barker, & Graham, 1999), a handful of studies (Abdullah, 2005, 2006a, 2006b, 2006c, Angell, Heffernan, & Megicks, 2008, Gatfield et al., 1999, Kwan & Ng, 1999, LeBlanc & Nguyen, 1997, Chowdhury & Sultan, 2005; Sultan & Tarafder, 2007; Sultan & Wong, 2010d, 2011, 2012) examined service quality dimensions in higher education sector from students' perspective which is essentially a demand-side perspective of determining service quality. These studies have identified several dimensions in the context of higher education institutions across various countries and cultures. The current study takes a view from a demand-side perspective of determining service quality and its key dimensions, and examines the role of cultural differences in global assessment of higher education service quality.

Culture and its dimensions

Culture is complex, multifaceted phenomenon that is expressed through behaviours, language, and traditions (Dedic & Pavlovic, 2011). It is considered as an umbrella concept that includes elements such as shared values, beliefs and norms that can collectively distinguish a particular group of people from others (Pizam & Reichel, 1997). The present study uses Hofstede's (1980) influential works as a theoretical background to examine the cultural impacts on the perception of service quality. Hofstede found four distinctive dimensions of national culture; those are individualism, power distance, masculinity, and uncertainty avoidance. This paper considers only two of the four cultural dimensions, namely, individualism and power distance, in order to comply the submission guidelines.

Individualism indicates "the relationship between the individual and the collectivity that prevails in a given society" (Hofstede, 1980). Individualistic culture emphasises "I" rather than "we". The individuals tend to be motivated by personal preferences, needs and rights, and for personal goals. On the other end of a bipolar continuum is collectivism, which is the tendency of people to belong to groups and to take care of each other in exchange for loyalty. In collectivistic cultures, the groups' interests are more important than the individuals', and there is a tendency that people are motivated by the norms and duties set by the in-group. According to Trandis, Bontempo and Villareal (1988), individualistic cultures are more likely to support competition, independence, self-orientation, freedom, self-confidence, and fairness; while collectivistic cultures favour cooperation, interdependence, other-orientation, harmony, conformity, friendship, forgiveness, and social usefulness.

Power distance is the extent to which members of groups accept power inequality between classes. High power distance cultures tend to be more hierarchical that group members expect the power to be distributed unequally on the bases of one's position, authority, competence, and resources (Hofstede, 1991). Low power distance cultures, on the other hand, tend to value quality and fairness. Individuals lean towards not to blindly obey the orders from the top. Power is more evenly allocated among group members.

In summary, culture is an important factor in higher education sector because it shapes how students perceive service quality, and subsequently this could affects their behaviour. In

particular, students from high individualism and power distance cultures would perceive service quality differently than students from low individualism and power distance cultures in the context of a higher education. The current literature is inadequate to explain the extent of culture or nationality that could have an influence on the assessment of service quality of a higher education institution.

Research method

The present study adopts methodological triangulation, where both qualitative and quantitative research methods were employed following the suggestions of several studies (see, for example, Dahlstrom, Nygaard, & Crosno, 2008, Freling & Forbes, 2005, Stavros & Westberg, 2009, Deshpande, 1983). This is a succeeding paper based on some earlier studies (Sultan & Wong, 2010c, 2010d, 2011, 2012) that explain the construct development processes and focus group data collection method. In summary, the operationalisation of the service quality construct includes seven items from Abdullah (2006c), four items from (Fornell, Johnson, Anderson, Cha, & Bryant, 1996), one item from Cronin and Taylor (1992), seven items from Sultan and Wong (2010a) and seven items from the focus group findings.

The scale development process followed the suggestion of Churchill (1979), and included 26 items in the final survey (please see Appendix 1). The items were validated through expert opinion. The expert panel included two senior academics experienced in qualitative and quantitative research methods in marketing and one senior practitioner from the marketing division, CQU. An online click-only survey link was sent to CQU's 3000 full-time students who were studying at one of its ten campuses in Australia. Thus, a random technique was adopted (Bryman & Bell, 2007, Bethlehem, 2010). The layout design of the online survey questionnaire followed the suggestions of (Dillman, Smyth, & Christian, 2009). Although the web-based survey in general receives a low response rate (Sax, Gilmartin, & Bryant, 2003), owing to 'required completion answer' constraint, there was no missing data. The incomplete cases and the cases having less than six months of studying experience were deleted. Finally, 227 usable responses (response rate is 7.6%) entered for data analyses.

In order to make data analysis manageable, we followed Crotts and Erdmann's (2000) research approach to classify students with various cultural backgrounds. Based on their nationalities, students were divided into three categories; namely, high, medium and low in terms of the four cultural dimensions. Appendix 2 depicts these three categories by nations. In the next stage, the data set was analysed statistically in order to establish valid and reliable scales. First, the exploratory factor analysis (EFA) followed by reliability tests were performed in order to find dimensions or factors of perceived service quality. Second, convergent and discriminant validity were established following the suggestions of the extant literature (Hair, Black, Babin, & Anderson, 2010, O'Leary-Kelly & Vokurka, 1998). Finally, the analysis of variance (ANOVA) test was conducted to determine cultural differences to assess service quality.

Data analysis

Respondents represent a variety of nationalities and gender. The respondents are skewed towards Australian students. About 78% of respondents are from Australia and 11% from India. The results also reveal that more female students replied to the survey than their male counterparts, for example, 72% of respondents are female and 28% is male respondents. The potential impacts of non-response bias were examined by comparing early respondents with late respondents; a method proposed by Armstrong and Overton (1977). No statistically significant differences were found.

Both confirmatory and exploratory analyses were used to determine the discriminant validity of the items. Literature suggests that there are three service quality dimensions (Sultan & Wong, 2010c). Confirmatory factor analysis was undertaken with structural equation modeling to examine the suggested three dimensions. After deleting three items on academic service quality, four on administrative service quality, and one on physical facilities service quality; a measurement model achieved satisfactory results, $\chi^2(132) = 417.72$, $p < .001$; GFI = .92; NFI = .94; RMSEA = .06.

An exploratory factor analysis using principle component analysis with varimax rotation method was conducted to further study the discriminant validity of the items. As the rotated component matrix in Appendix 3 demonstrates, the items clearly form three distinctive dimensions. This also demonstrates reliability of the items with Cronbach Alpha test. The results show that all coefficient alphas are well above the 0.70 suggested cut-off level (Robinson, Shaver, & Wrightsman, 1991, Francis, 2001). Item-to-total correlations are also above the recommended 0.20 level (Nunnally & Bernstein, 1994). Finally, Appendix 4 shows the ANOVA test results. ANOVA tests were performed to compare the three dimensions of perceived service quality in terms of the two cultural dimensions. The results indicate some statistically significant and insignificant differences that are explained in the section below.

Discussion and managerial implications

The results indicate that none of the academic service quality items is found statistically significant in all two cultural dimensions. It means that students do not perceive any differences in academic service quality irrespective of their cultural backgrounds. An example could clarify this further. An Indian student with high power distance, where power is more hierarchical and centralised, would perceive academic service quality in a similar way like an Australian student, where power distance is relatively low. Therefore, the key features of academic service quality across cultural dimensions and nations have equal importance to students.

In the administrative service quality dimension, in contrast, four out of six items were found statistically different in the power distance; and all six items were different in the individualism dimension. In particular, students' perceptions about administrative staff's courtesy, service delivery, record keeping and meeting requirements are found significantly different across power distance and individualism cultures. In addition, the two particular items—helpful admission department and skilled administrative staff—are perceived differently among the students who represents individualism culture. These results are significant at the 0.05 level.

Results for the physical facilities service quality are mixed. Two items in power distance and three items in individualism were found different. In particular, students' perceptions about up-to-date equipments and classroom facilities are found significantly different across power distance and individualism cultures. In addition, there is a significant difference among students from individualism culture in terms of perception about the infrastructure of the university.

The results also demonstrate that low power distance cultures have higher administrative service perception than the medium and high power distance cultures. Students from high power distance cultures perceive physical facilities service quality relatively higher than the medium and low categories.

In terms of the individualistic dimension, students with high individualistic culture perceive administrative service quality much higher than those with lower individualistic culture (i.e. feminine culture). For example, students with high individualism culture (e.g., Australia, United Kingdom, New Zealand etc.) would expect to have personal attention from their staff. A personal greetings, attention, freedom and fairness could motivate these students. Conversely, group orientation, collective activities and group task could motivate Chinese, Japanese, Indonesian and Malaysian students.

Thus, institutions attempting to understand the role of culture on student and staff management, and its impact on sustainable existence and resource allocation in the context of higher education could get some useful guidelines from this study. This could be suicidal if managers focus on a particular set of activities for various programs for a set of students with homogeneous weights for each of the cultural dimensions.

Conclusion

A marketing approach to examine students' perceptions of service quality in the context of higher education can improve service functions, and attract and retain students in a global context. Ignoring the nature and importance of service quality is not advantageous for universities in the higher education industry, especially when the most of the students are coming in Australia from various countries.

The paper is among the first few to examine the differences of cultural backgrounds and their influence on perceived service quality in a higher education context. However, this study has several limitations. First, this study has a limited number of international and domestic students. Second, the sub-samples of this study are too small to make a generalized decision from which the sample has been drawn. Perhaps, the lack of significance in academic service quality is due to small numbers of respondents in these sub-samples.

It is recommended that future research should take a relatively big sample, and also could look into other education areas such as technical and community colleges. Since this study concentrates only an Australia university, the findings from this study could be compared with studies in other countries so that the findings can be generalized. Moreover, a new qualitative research could better shed light on exactly why certain cultures perceive service quality differently. Service quality in higher education is an important issue. In addition, it would be useful to study the moderating effect of reputation of universities to better detect the relationships between service quality and culture. Service quality in higher education is an ever changing area. More research is required to fully understand the dynamic nature of culture and its influence on higher education sector.

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Appendix 1 Survey items*Academic service quality*

SQ_1 I find that academics at this University are knowledgeable

SQ_2 Lecturers show sincere interest in solving my academic problems

SQ_3 My academic performance is recorded correctly (deleted after factor analysis)

SQ_4 Lecturers provide feedback about my progress (deleted after factor analysis)

SQ_5 I receive adequate time for consultation with lecturers

SQ_6 I find that lecturers are skilled in teaching

SQ_7 The academic backgrounds of the lecturers are excellent

SQ_24 My overall evaluation of the service quality provided by the teaching staff of this University is good

SQ_26 The teaching staff meet my requirements (deleted after factor analysis)

Administrative service quality

SQ_8 I find that the administrative staff is courteous

SQ_9 I find that the administrative staff is prompt to provide service

SQ_10 I find that the administrative staff keeps accurate records

SQ_11 The admission department of this University is very helpful

SQ_12 I find that the University's career counselling service is very helpful (deleted after factor analysis)

SQ_13 I find that the administrative staff is skilled

SQ_14 The overall environment of this University is friendly (deleted after factor analysis)

SQ_23 My overall evaluation of quality with regard to support functions of this University is good (deleted after factor analysis)

SQ_25 My overall evaluation of the service quality provided by the administrative staff of this University is good (deleted after factor analysis)

SQ_27 The administrative staff meet my requirements

Physical facilities service quality

SQ_15 I find that classroom learning is very practical (deleted after factor analysis)

SQ_17 The location of the University is ideal

SQ_18 I find that this University has up-to-date equipment

SQ_19 I find that the classroom facilities are adequate

SQ_20 I find that the library facilities are adequate

SQ_21 I find that this University has good infrastructure

SQ_22 I find that the scenic beauty of this University is excellent

Appendix 2 Four cultural dimensions by country

<i>Nationality</i>	<i>Power distance</i>	<i>Individualism</i>
Australia	Low	High
China	High	Low
India	High	Medium
Indonesia	High	Low
Japan	Medium	Medium
Kenya	Medium	Low
Malaysia	High	Low
New Zealand	Low	High
Pakistan	Low	High
South Africa	Medium	High
United Kingdom	Low	High

Appendix 3 Exploratory factor analysis and reliability test results

<i>Academic service quality</i>				<i>Administrative service quality</i>				<i>Physical facilities service quality</i>			
<i>Items</i>	<i>Factor Loading</i>	<i>Corrected item-total correlation</i>	<i>Coefficient Alpha Reliability</i>	<i>Items</i>	<i>Factor Loading</i>	<i>Corrected item-total correlation</i>	<i>Coefficient Alpha Reliability</i>	<i>Items</i>	<i>Factor Loading</i>	<i>Corrected item-total correlation</i>	<i>Coefficient Alpha Reliability</i>
SQ_1	.69	.72	0.91	SQ_8	.84	.83	0.93	SQ_17	.64	.46	0.82
SQ_2	.83	.77		SQ_9	.82	.86		SQ_18	.71	.63	
SQ_5	.73	.72		SQ_10	.77	.80		SQ_19	.68	.64	
SQ_6	.79	.82		SQ_11	.74	.74		SQ_20	.69	.59	
SQ_7	.69	.75		SQ_13	.79	.80		SQ_21	.77	.74	
SQ_24	.65	.74		SQ_27	.74	.78		SQ_22	.55	.49	

Appendix 4 Results of ANOVA tests

<i>Power distance</i>					
	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>F</i>	<i>p-value</i>
<i>Academic Service Quality</i>					
SQ_1	5.52	5.13	5.63	1.245	.29
SQ_2	5.29	5.25	5.52	.79	.46
SQ_5	5.23	5.25	5.11	.15	.86
SQ_6	5.19	5.13	5.33	.28	.75
SQ_7	5.19	5.25	5.37	.34	.72
SQ_24	5.39	5.38	5.46	.73	.93
<i>Administrative Service Quality</i>					
SQ_8	5.42	5.25	5.88	3.58	.03*
SQ_9	5.39	4.88	4.8	4.50	.01**
SQ_10	5.16	5.00	5.66	3.88	.02*
SQ_11	5.55	4.88	5.56	1.36	.26
SQ_13	5.26	5.00	5.53	1.64	.20
SQ_27	5.52	4.88	5.72	2.95	.05*
<i>Physical Facilities Service Quality</i>					
SQ_17	5.74	5.25	5.30	1.72	.18
SQ_18	5.61	5.13	4.91	4.29	.02*
SQ_19	5.61	5.00	5.02	3.85	.02*
SQ_20	4.97	5.25	5.41	1.87	.16
SQ_21	5.19	5.25	5.03	.41	.66
SQ_22	5.10	5.25	5.23	.16	.85
<i>Individualism</i>					
	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>F</i>	<i>p-value</i>
<i>Academic Service Quality</i>					
SQ_1	5.63	5.64	5.08	2.12	.12
SQ_2	5.52	5.40	5.00	1.53	.22
SQ_5	5.12	5.40	4.85	.96	.39
SQ_6	5.32	5.36	4.92	.76	.47
SQ_7	5.37	5.32	4.92	.95	.39
SQ_24	5.46	5.56	5.08	.90	.41
<i>Administrative Service Quality</i>					
SQ_8	5.88	5.60	4.92	5.50	.01*
SQ_9	5.80	5.44	5.00	4.24	.02*
SQ_10	5.66	5.36	4.62	6.18	.00**
SQ_11	5.56	5.76	4.77	3.42	.04*
SQ_13	5.53	5.44	4.69	3.73	.03*
SQ_27	5.71	5.68	4.92	3.58	.03*
<i>Physical Facilities Service Quality</i>					
SQ_17	5.30	5.84	5.31	2.11	.12
SQ_18	4.92	5.68	5.15	4.27	.02*
SQ_19	5.01	5.76	5.08	5.04	.01*
SQ_20	5.41	5.24	4.62	2.84	.06
SQ_21	5.05	5.44	4.54	3.00	.05*
SQ_22	5.23	5.32	4.77	.97	.38

significant at .05 level; **significant at .01 level.