

CampusQual: A Model of Measuring Foreign Students' Campus Adaptation Level in China

- A case study of Korean Students in Tsinghua University -

CampusQual 평가모델을 활용한 외국유학생의 대학생활 적응도 조사

- 중국 칭화대학교의 한국유학생들을 중심으로 -

Xinyue Gu(구신유)*

Chengguang Wei(위성광)**

Soosang Lee(이수상)***

<Contents>

I. Introduction	3. The Analysis of Foreign Students Campus Adaptability Level
II. Modelling CampusQual	IV. Discussion
III. Data Analysis based on CampusQual Model	1. Conclusion
1. Raw Data Evaluation	2. Future Study
2. Construction of Adaptation Formula	

ABSTRACT

The study aims at constructing adaptation model, CampusQual, to evaluate the services which Tsinghua provides for Korean Students. The study is based on ServQual's "expectation-feeling difference" via conducting a survey on satisfaction on their campus life. We implement a survey including 30 questions in 5 sections: demographic statistics, study & information literacy, campus life, social & culture and regulations. Then through CampusQual model, we analyze the Korean students' adaptation level. CampusQual is a new service model that would enable Korean students to better live and study in universities in China. It also provides feasible suggestions and guidance for administrators on improving campus services for Korean Students.

Keywords: CampusQual model, Korean Students, Cultural adaptation, Social network, Degree of satisfaction

초 록

본 연구는 기존의 ServQual 평가모델을 기초로 대학 캠퍼스에 적용가능한 CampusQual 평가모델을 개발하여 중국 칭화대학교에 재학 중인 한국 학생을 대상으로 교내 학습, 정보활용과 대학생활 등에 적응도 조사를 수행하였다. 이 평가모델에는 인구통계학적 변인, 학습과 정보활용, 교내생활적응, 시설환경, 사회교류관계, 관련된 학교제도와 규정을 포함하는 총 5개 분야 30개의 변인들에 대한 설문문항을 포함하고 있다. 만족도, 요구도, 적응도로 구분되는 평가결과는 CampusQual 평가모델에서 제시한 수식으로 계산하였다. 평가결과를 기반으로 한국 유학생이 칭화대학교에서 학업과 생활을 보다 원활하게 수행해 나가는데 필요한 새로운 캠퍼스 서비스 방안을 제시한다.

키워드: CampusQual 평가모델, 한국유학생, 문화적응, 소셜 네트워크, 만족도

* Studying Ph.D degree, School of Economics and Management of Tsinghua University (guxy.15@sem.tsinghua.edu.cn) (first author)

** Vice professor, Library of Tsinghua University(weichg@lib.tsinghua.edu.cn)

*** Professor, Department of Library, Archives and Information Studies of Pusan National University (sslee@pusan.ac.kr) (corresponding author)

•논문접수: 2015년 11월 26일 •최초심사: 2015년 11월 26일 •게재확정: 2015년 12월 16일

•한국도서관정보학회지 46(4), 511-527, 2015. [http://dx.doi.org/10.16981/kliss.46.201512.511]

I . Introduction

From 2003 to 2013, the number of foreign students in Tsinghua (including undergraduate, graduate and doctoral students) grew from less than 400 to 2,620. In 2013, there were 356,499 foreign students from 200 countries and regions in Chinese domestic universities, research institutes and other educational institutions all around the country. This number increased by 8.58 percent compared to the previous year, and is 4.58 times of that in 2003. In recently years, Korean students make up over 50% of the foreign students. This has brought up adaptation problems to an increasingly prominent stage. Many Korean students have complained that they: “Cannot get accustomed to the food that is different from my hometown’s”, “Often feel anxious for being weak in Chinese upon matriculation”, “Mainly take courses designed specifically for overseas students; therefore having little communication with the locals and find it difficult to get along with Chinese students”. These inadaptability can be classified in the following two categories: Firstly, leaving hometown for an unfamiliar environment itself can be challenging, with possibilities of ideology collisions there might arise cross-cultural inadaptability. Second, as Korean Students are here to study, inadaptability in learning could be a major reason for anxiety. It is worth noting that study includes but is not restricted to academic learning, curriculum and assignments, all of which deserve special attention in the research process.

The problem of cross-cultural adaptation has been thoroughly discussed by the academic community for years. While many scholars mainly focus on the problem concerning domestic cross-nation adaption, the cross-cultural adaptation problem, especially the adaption to campus environment for those oversea students in China, has just gained its popularity in latest years, resulting from the growing opening-up of colleges. The classification of on-campus cultural adaption has been studied in considerable existing literatures. Guohui Zhu (2011) divided the concept of social and cultural adaption into environment (including climate, diet, accommodation, pace of life, transportation, shopping etc.), social contact (study, social activities and making friends) and service mode (at different places such as shopping malls, banks and dining halls), and the factor of individual psychological adaptability. In another research conducted by Jihua Luo (2006), the same concept is classified as psychological adaptability (identity recognition, interests etc.) and behavioral adaptability (leaning methods, sociability and problem solving skills)

and students are assessed based on their motivation and experience prior to the overseas study. Collectively, the analysis concerning on-campus cultural adaptation in existing literatures has covered language skills, identity recognition, communication, symbol comprehension, diet, habits, institutional discipline and other aspects.

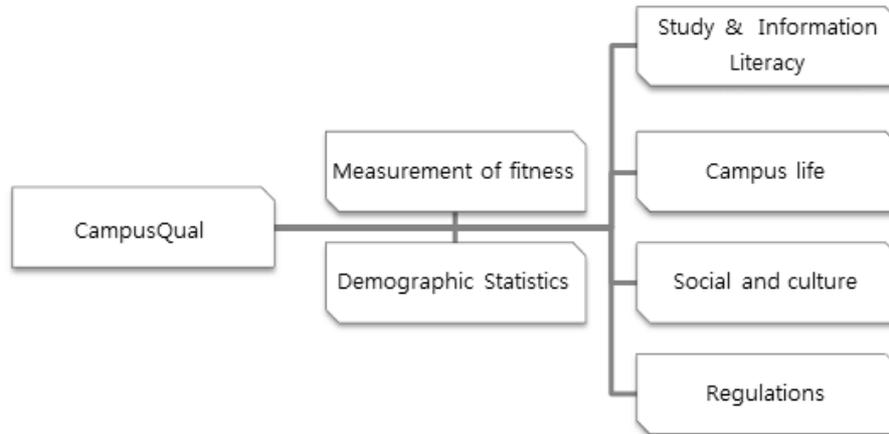
The majority of existing literatures are especially designated towards overseas students, trying to analyze their degree of adaptation via a great number of interviews conducted. However, it is crucial for us to evaluate the atmosphere of study created and thus provide suggestions on how to raise service standards. Little has been discussed in domestic literatures on formulating a feasible, measurable and promotable criterion. This study aims at establishing a criterion, named CampusQual, which evaluates services provided for overseas students. This set criterion would fulfill functions related to evaluation, comprehension and guidance altogether. To be more specific, evaluation refers to the establishment of a model designed for grading overseas students' satisfaction; comprehension aims at working out the relations among given indicators, both primary and secondary and thus figure out the weakness of current services; guidance function gives a direction for improvement, seeking for better learning experience on campus.

The study starts with an adaptation model. Based on existing studies domestic and abroad, we formed 4 dimensions: study, life, social and regulation. Questions under each dimension are designed and raised, followed by statistical analysis figuring out the essentials for improvement.

II. Modelling CampusQual

CampusQual Model consists into two parts, demographic statistics and measurement of adaptation. The basic information, including demographic statistics, language proficiency, personal and university-related information, is necessary in analyzing samples and data. On one hand, information concerning age, major, degree, nationality and so on helps to establish composition of research objects (how research objects are composed). On the other hand, there may be possible causality between information such as languages, incentives to attend school, hours devoted to study, emotions etc. and the evaluation of adaptation. The measurement of adaptation is the core part of CampusQual Model, through which evaluation of adaptation on studying environment abroad can hopefully be acquired, composed by 9 indicators covering in 4

dimensions - study & information literacy, campus life, social and culture and regulation. Based on the expectation ranking and actual perceptions, estimate the adaptation level of the 9 indicators and dig deeply the correlation between indicators.



<Figure 1> Structure of CampusQual Model

In measurement of adaptation level, there are quantitative evaluation questions and qualitative descriptive multiple choice questions under each single dimension. Questions with a “★” are for satisfaction evaluation, where interviewees need to grade their least level of tolerance, actual perception and ideal expectation on a scale of 1-9 respectively. Questions with a “☆” are multiple choice questions concerning dissatisfied areas. Respondents are to tick an item if they are not satisfied with it, and tick “No Difficulties Met” if they are satisfied.

Under study & information literacy dimension, Korean Students’ perception of service quality and facilities is evaluated. Recapitulating studies done by Luo Jihua(2006) and many others, objectives for evaluation include the course itself, teachers and learning materials. The three questions raised are listed as following:

- 6. Your degree of satisfaction on teachers’delivery★;
- 7. Rationality of curriculum provision★;
- 10. Degree of satisfaction on academic resources★;

There is also a multiple choice question on dissatisfaction:

- 8. Difficulties in study☆

Campus life questions center on Korean Students' perception on services and facilities regarding food and accommodation (including dining halls, dormitories and supermarkets). The three questions are:

18. Level of satisfaction on dining halls services★;

20. Level of satisfaction on accommodation★;

22. Level of satisfaction on shopping★;

There are three multiple choice questions on dissatisfaction:

19. What adds to your inconvenience when dining in the Dining halls☆;

21. What adds to your inconvenience when living in dorms☆;

23. What adds to your inconvenience when purchasing necessities on campus☆.

Social and cultural dimensions look into Korean Students' adaptation of social contacts in a foreign environment. The two questions are related to Korean Students themselves, their fellow classmates and the university:

13. Level of acceptance among students★;

17. University support on international student clubs and activities★;

Two more questions measure the dimension of social and cultural:

12. Level of confidence on interpersonal communication skills (qualitative question);

16. Frequency of taking part in club activities (quantitative question).

In regulation dimension, we look into the convenience of seeking for administrative services on campus:

24. Convenience on administrative services like applying for visas and insurance★;

There is also an open question:

25. Suggestions on policies and services concerning Korean Students.

Survey is conducted among Korean Students in Tsinghua University using the above questionnaire based on CampusQual. 55 questionnaires are distributed and are all received, achieving 100% response rate. When determining whether a responded questionnaire is effective, we require: a) all multiple choice questions answered; b) lowest level of acceptance is no greater than the highest expectation; c) answers to questions with“★” are not identical; d) If “No Difficulties Met” is chosen for a question with ☆, no other options should be ticked simultaneously. Based on the above criteria, 15 questionnaires are considered ineffective, reaching

an effective rate of 72.7%. Further, we conduct α credence analysis on “★”-marked questions. We use Stata(statistical software package) to reports credence coefficient, 0.9220, displaying great congruity among data.

As Demographic statistics in Table 1 shows, the 40 effective responses reveal a gender ratio of 1.22:1. Most of respondents are from School of Humanities, School of Mechanical Engineering(SEM). In terms of HKS level of Korean Students, 63% are high level Chinese speakers, while 3 students are at an elementary level, constituting 8%. Therefore, more respondents can speak fluent Chinese than those who cannot.

<Table 1> Demographic Statistics

	%
Gender	
Female	55
Male	45
Age	
18-22	90
23-25	10
School or Department	
School of Architecture	2.5
School of Civil Engineering	5
School of Economics and Management	7.5
School of Humanities	60
School of Information Science and Technology	5
School of Life Sciences	2.5
School of Mechanical Engineering	12.5
School of Social Sciences	5
Identity	
Undergraduate	97.5
Language Trainee	2.5
Study in Tsinghua since	
1-6 months ago	2.5
7-12 months ago	20
13-24 months ago	57.5
25-36 months ago	15
More than 36 months ago	5
HSK level	
Primary	7.5
Intermediate	30
Advanced	62.5

III. Data Analysis based on CampusQual Model

1. Raw Data Evaluation

The CampusQual model measures the adaptation level in a multi-cultural learning environment according to foreign students. The adaptation level is determined by a) the absolute level of foreign student's perceptions to the certain aspect of the environment, and b) the significance of the aspect according to foreign students. In order to construct measurement for the model, we referred to current mainstream of service quality measurement, typically as ServQual, LibQual+, etc. The core theory of ServQual measurement is "discrepancy between consumers' perceptions and expectations". Specifically, for each item a difference score Q (representing perceived quality along that item) was defined as $Q = P - E$, where P and E are the ratings on the corresponding perception and expectation statements, respectively. In each aspect, a seven-point scale ranging from "Strongly Agree" (7) to "Strongly Disagree" (1), with no verbal labels for scale points 2 through 6, is settled. The idea of using discrepancy between perceptions and expectations straightforwardly reveals the degree of that a corresponding aspect should be improved. LibQual+ stems from ServQual, and extends the scale from "Strongly Agree" to "Strongly Disagree" to nine points. Furthermore, the measure adds questions on library service. Instead of abstract notion of dimensions, the questions are categorized in four concrete dimensions including 1) Access to Information, 2) Effect of Service, 3) Library as Place and 4) Personal Control, which enhance the feasibility and readability of the measuring result. This study refers to the idea of "discrepancy between consumers' perceptions and expectations". Based on this, a three-level grading is set, which consists of 1) Actual Perception, 2) Highest Level of Expectation and 3) Lowest Level of Tolerance, to then illustrate the discrepancy through the model constructed by this study. The study also absorbs the strong point in LibQual+, which is an extended nine-point scale and questioning in concrete dimensions.

We have referred to well-established questionnaires in previous literatures, and set 9 indicators in 4 dimensions covering study, campus life, social and culture as well as school system. For each indicator, interviewees are asked to grade their lowest level of tolerance, actual perception and highest level of expectation on a 9-point scale ranging from the minimum level (1) to the

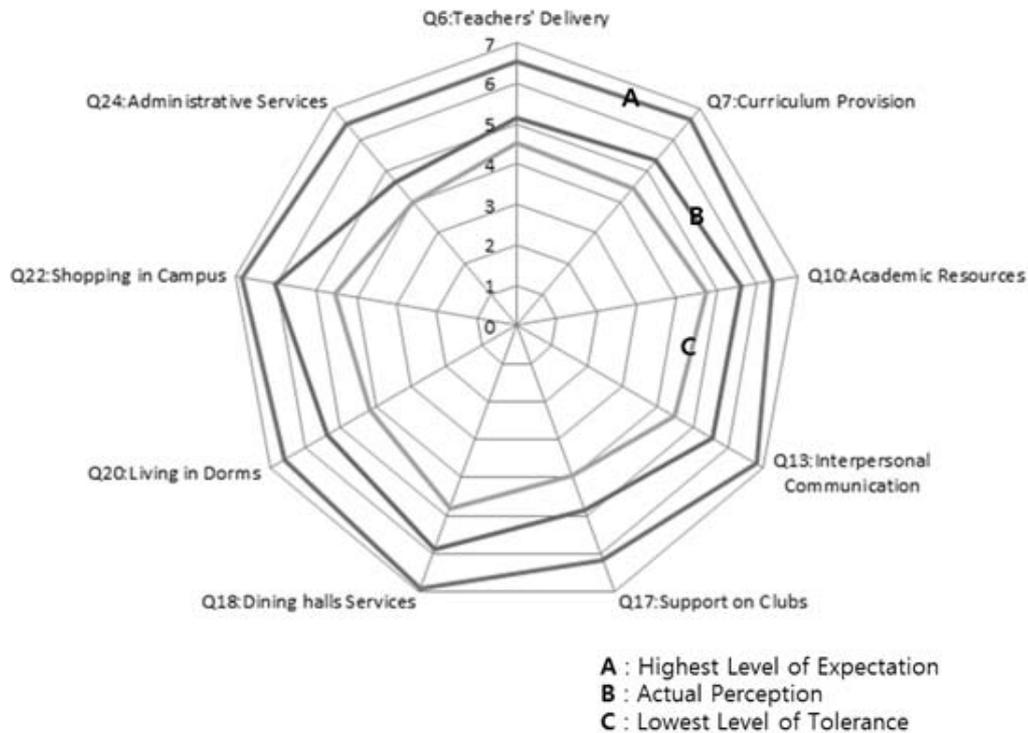
maximum level (9) respectively. Then calculate the arithmetic average of valid grades for each indicator. The result will be later used in measuring adaptation level.

The arithmetic average of lowest level of tolerance, actual perception and highest level of expectation for 9 indicators are respectively shown as below:

〈Table 2〉 Average Grading on Campus Adaptability in Forms of 9-indicator, 3-index Evaluation

Indicator	Lowest Level of Tolerance (L)		Actual Perceptions (R)		Highest Level of Expectation (H)	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
Teachers' Delivery	4.53	1.51	5.13	1.57	6.55	1.87
Curriculum Provision	4.45	1.60	5.33	1.75	6.68	1.94
Academic Resources	4.73	1.96	5.6	1.95	6.38	2.20
Interpersonal communication	4.48	2.01	5.58	1.97	6.83	1.89
Administrative Services	4.00	1.76	4.63	1.78	6.53	2.52
Dining halls Services	4.80	2.26	5.90	2.25	6.93	1.97
Shopping in Campus	4.53	1.91	6.03	1.89	6.85	2.18
Living in Dorms	4.18	2.09	5.38	1.86	6.60	1.86
Support on Clubs	3.93	2.07	4.85	2.14	6.18	2.32

Two points of information can be inferred from the table above. Firstly, the table reveals the absolute level of foreign students' anticipations (grading on highest-level expectation and lowest-level tolerance) towards services in campus. By comparing figures among each row, we can put 9 indicators in order. For example, students are holding the highest criteria to tolerant "Dining halls Services", i.e. they can be more easily dissatisfied not to have a good dining hall services. Also, students have the lowest expectation on "Support on Clubs". Secondly, by comparing figures among each column, we can discover the relative level of actual perceptions according to anticipations. For example, students are not having a good administrative service, but they expect relatively highly on it. To clearly see the relationship among each column, the radar chart below is provided to demonstrate the relative level of each indicator. The point at each angle of the nonagon to the center is the grade which comes from Table 2.



<Figure 2> Radar Char of Average Grading in Forms of 9-indicator, 3-index Evaluation

2. Construction of Adaptation Formula

Given the average grades of 3-index evaluation, we need to analyze the data through data processing, in order to find out the discrepancy of perceptions and anticipations and obtain ordered results of adaptability respectively. As for adaptability, this study has referred to the opinion on service quality evaluation proposed by Kotler Phillip (1999), that service quality is an emotional status, either delighted or disappointed, after one compares his or her anticipation to perceptible effect. He analyzed service quality with double factors, satisfaction (perceptible effect on services) and demand (anticipation of the services). In a word, when other factors remain constant, the more the consumers are satisfied, the better he or she will adapt to the service. On the contrary, the more the consumers are demanding, the larger the gap between his or her anticipation and reality will be, and therefore the worse he or she will adapt to the service. The connection provides a theoretical basis to methodologies and models of service satisfaction and cross-cultural adaptability.

In this study, satisfaction expresses how foreign students evaluate various services provided in campus, indicating the quality of the services in different indicators. Demand expresses how well the foreign students expect that the service will be achieved, indicating the significance of the services. Hence in order to analyze the adaptability, we need to define a reference line to distinguish the relative position in binary coordinates (satisfaction, demand) of each indicator. The study firstly takes two-factor analysis to construct coordinate axes concerning satisfaction and demand, and then calculates satisfaction and demand to obtain relative position of each indicator.

Satisfaction is denoted by S_i , which is the proportion of actual perception in the range from tolerance to expectation, and shall be calculated as below (The minimum result is standardized to be 0):

$$D_i = \frac{H_i + L_i}{2} - \min_{1 \leq j \leq 9} \left\{ \frac{H_j + L_j}{2} \right\}$$

Demand is denoted by D_i , which is the average of tolerance and expectation, and shall be calculated as below (The minimum result is standardized to be 0):

$$S_i = \frac{R_i - L_i}{H_i - L_i} - \min_{1 \leq j \leq 9} \left\{ \frac{R_j - L_j}{H_j - L_j} \right\}$$

The two factors, satisfaction and demand, determine the adaptability of each indicator. On the purpose of sorting the sequence of adaptability in order, a line is introduced as the midway reference line. The function of this line is as below:

$$y = kx + b$$

As the function shows, the slope of the reference line is k , and the intercept with axis y is b . According to the description of two-factor analysis, the reference line will pass through the minimum value of both satisfaction and demand ($\min(D_i)$, $\min(S_i)$), as well as the maximum value ($\max(D_i)$, $\max(S_i)$). Since the minimum values are standardized to be 0, the line is through the origin of the coordinate axes:

$$k = \frac{\max(D_i)}{\max(S_i)}, b = 0$$

Meanwhile the reference line with a slope of k is obtained in Figure 2.

Adaptability Index Δ_i is the vertical distance from D_i to midway reference line. The result is positive when the point of that indicator locates higher than the line, and vice versa. An expression of “ $\Delta_\alpha > \Delta_\beta$ ” represents that indicator α has a higher adaptability than indicator β . The adaptability Index Δ_i is calculated as below:

$$\Delta_i = S_i - \frac{1}{k} D_i = \left(\frac{H_i - R_i}{H_i - L_i} - \min_{1 \leq j \leq 9} \left\{ \frac{H_j - R_j}{H_j - L_j} \right\} \right) - \frac{\max(S_i)}{\max(D_i)} \left(\frac{H_i + L_i}{2} - \min_{1 \leq j \leq 9} \left\{ \frac{H_j + L_j}{2} \right\} \right)$$

3. The Analysis of Foreign Students Campus Adaptability Level

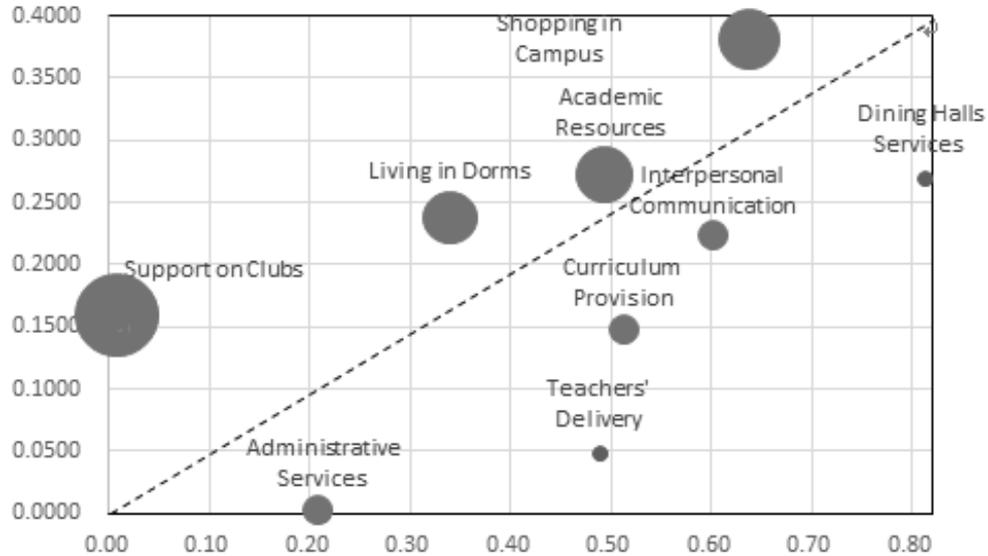
Based on the Adaptation Measure Model in section 3.1, in this section we put numerical data acquired from the survey into the model and calculate the results.

As Table 2 shows, $\max(D_i)$ is Dining halls Services (0.81) and $\max(S_i)$ is Shopping in Campus (0.40). Therefore the slope k is 2.04, i.e. the reference line is $y=2.04x$.

<Table 3> Satisfaction, Demand and Adaptability Index

	Satisfaction (S)	Demand (D)	Adaptability Index (A)
Teachers' Delivery	0.05	0.49	-0.19
Curriculum Provision	0.15	0.51	-0.10
Academic Resources	0.28	0.50	0.03
Interpersonal Communication	0.22	0.60	-0.08
Support on Clubs	0.16	0.00	0.16
Dining Halls Services	0.27	0.81	-0.13
Shopping in Campus	0.40	0.64	0.09
Living in Dorms	0.25	0.34	0.08
Administrative Services	0.00	0.21	-0.10

Adaptability Index determined by deviation from the point to reference line can be easily seen:



<Figure 3> Demand-Satisfaction Coordinates with Midway Reference Line

As Figure 3 shows, 9 indicators in order from the most adaptable to the least are Support on Clubs, Shopping in Campus, Living in Dorms, Academic Resources, Interpersonal Communication, Administrative Services, Curriculum Provision, Dining halls Services and Teachers' Delivery. Above the reference line are four points of better adaptable indicators, and those five below are less adaptable indicators, which need imperative improvement. These 9 indicators imply the feature of 4 dimensions where indicators belong:

In the dimension of study, the adaptability index is calculated from the average adaptability of Teachers' Delivery, Curriculum Provision and Academic Resources, valued -0.09 and ranked 3 in 4 dimensions. Among all the indicators in the dimension of study, the adaptability index of academic resources is positive, while those of teachers' delivery and curriculum provision are negative. The multiple choice questions concerning dissatisfaction shows that, the most chosen items of negative factors are "do not have sound foundation in specialized area" and "hindered communication between teachers and students". The university needs to provide more support for foreign students on information and communication channels.

In the dimension of campus life, the adaptability index is the average adaptability of Dining halls Services, Shopping in Campus and Living in Dorms, valued 0.04, ranked 1 in 4 dimensions. The high rank is due to high level of both satisfaction and demand. Among all the indicators

in the dimension, the adaptability index of living in dorms and shopping in campus are positive, while this of dining halls services is negative. The multiple choice questions implies that the dissatisfaction mainly of dining halls services comes from the “distant location” and “unpleasant dining environment”. The university should pay attention to a more comfortable and convenient dining environment. Furthermore, as for shopping in campus, girls generally have lower opinions than boys, as the assumption of “adaptability of girls \leq adaptability of boys” did not pass the 90% confidence level one-tailed t-test. Therefore shopping environment may take more girls demand and feelings into consideration.

In the dimension of social and culture, the adaptability index is calculated from the average of Interpersonal Communication and Support on Clubs 0.04, ranked 2 in 4 dimensions. Among all the indicators in the dimension of study, the adaptability index of interpersonal communication is -0.08, which is on low side. Interpersonal communication is also the most influential indicator to anxiety, with a correlation of 0.5772. Meanwhile, interpersonal communication is also partially dominated by linguistic skills, for the assumption of “adaptability with linguistic deficiency \geq adaptability with linguistic proficiency” did not pass the 90% one-tailed t-test. Adaptability of support on clubs is relatively high, due to corresponding low demand, which implies students could well adapt to low level of support on clubs.

The dimension of school systems consists of only one indicator, administrative services, valued -0.10 and ranked the last place. Administrative services requires urgent improvement.

By carrying on analysis of four dimensions, we see “hardware provision” such as academic resources, living and shopping conditions have positive value of adaptability, and “software provision” such as teachers’ delivery, curriculum and interpersonal communication perform not well. This suggests the university should pay more attention on the latter, and adopt timely action to improve software services.

We have also analyzed correlation matrix for all indicators. The value of each correlation is interpreted as follow: 0 for no correlation, (0-0.3] for weak correlation, (0.3-0.7] for middle correlation and (0.7-1.0] for strong correlation. We summarize relationship among indicators, and important discovery are shown as below:

Dining halls services and shopping in campus have a correlation of 0.7091, implying a strong correlation. Academic resources and three other indicators have middle correlations - dining halls services, shopping in campus and curriculum provision – with a correlation of 0.6093, 0.6428 and

0.6706 respectively.

To discover what behind the 4 correlation coefficients, we further look into the correlation matrix for indicator- or dimension-related multiple choices, i.e. questions with ☆. Given that multiple choices generate binary variables (whether ticked or not ticked), instead of 9-point grades, the correlation results will be theoretically weaker. We see several items have at least weak correlations, and we divided these items into 3 groups.

Group 1 represents the variety and quality of the products. “distasteful food” in “Dining Halls Services”, “inadequate goods” and “poor quality of goods” in “Shopping in Campus” have much positive correlation with each other. The correlations between “distasteful food” and the rest of two items are respectively 0.3821 and 0.4587, and that between “inadequate goods” and “poor quality of goods” is 0.4483.

Group 2 represents the sense of distance caused by language, culture or geography. The correlations between “not understanding textbooks” in “Study” and three other items: “not understanding lessons” in “Study”, “Supermarkets are remote from where I am” in “Shopping in Campus” and “dining halls and classrooms are remote from where I am” in “Campus Life” are respectively 0.5092, 0.3267 and 0.3273, which are considered to be middle correlations.

Group 3 represents standardized management system. “Unsafe living condition” in “Living in Campus” and “Confusing price tag” in “Shopping in Campus” have a correlation of 0.5044. We recognize these 2 items as procedural deficiency in management.

The managerial implication of correlation and grouping analysis is that campus administrators can better notice where to be improved by discovering co-determinants across indicators. For instance, group 1 suggests the importance of providing the variety and quality in both “Dining Halls Services” and “Shopping in Campus”. Administrators can adopt similar methods to understand customers’ true needs in eating and shopping. For another example, group 3 suggests the importance of management system in either field of “Living in dorms” and “Shopping in Campus”. Eliminating the problem of “unsafe living condition” requires well established regulations, standardized procedures and well trained staff, and solving the problem of “confusing price tag” also needs the steps above. Based on current survey in this study, questions concerning academic resources is to be added to dig out co-determinants of academic resources, curriculum provision, dining halls services and shopping in campus, whose correlations are strong.

IV. Discussion

1. Conclusion

This study, based on the idea of “discrepancy between perception and expectation” from ServQual and “two-factor analysis” from Philip Kotler, constructed CampusQual Model to measure the adaptability of foreign students studying in campus. The study chosen the Korean students in Tsinghua University as research target. Through survey we obtained data concerning their recognition of study, campus life, social and culture as well as school system. Then analyzed the data by adopting CampusQual model. The adaptability indexes designed by the study, Δ , of each indicators show that:

First of all, CampusQual provides suggestions of different priorities to improve services according to different indicators. By calculating binary coordinate positions of indicators (demand, satisfaction) as well as their deviation to midway reference line, we can sort the dimensions where indicators belong. From the analysis we found that in Tsinghua University, dimensions considering the adaptability in descending order are campus life, social and culture, study and school system.

Secondly, indicators of “hardware provision” such as academic resources, living condition and shopping condition perform well, but those of “software provision” such as teachers’ delivery, curriculum provision and interpersonal communication needs to be urgently improved. Also, indicator of support on clubs with high adaptability has simultaneously low level of satisfaction and demand, which implies that low satisfaction will not hinder adaptability in this case.

Additionally, we found that gender exerts certain influence on indicators. Linguistic proficiency and year of study can affect anxiety in various degrees. However t-test on grades erased the gap among students with different majors or study motivation. The study maintained the hypotheses that these personal statistics have no influence on adaptability.

2. Future Study

A multi-perspective and multi-methodology analysis has revealed foreign students’ current

study experience in campus. The results helped schools to understand the connotation of campus management towards foreign students, as well as inspire the school to lead a sound direction of carrying out improvements in the future. The study has laid down the rigorous footstone for the following study, and puts forward future visions as below:

Firstly, a larger-sample survey may be considered to enhance the stability of the statistical results. Secondly, the multiple choices with ☆ can be designed as ranking questions, in accordance with their differentiation of significance, and thus correlations of multi-valued items, instead of two-valued items can be analyzed to reduce statistical deviation. Thirdly, a greater variety of major and region can help discover whether the influence of major and region on evaluations does exist, which will improve the quantitative accuracy. These valuable suggestions are gained from the survey and the research, hoping to develop following study in a more precise way, and to be served as reference for other satisfaction research in campus.

References

- Adler, P. 1975. "The transition experience: An alternative view of culture shock," *Journal of Humanistic Psychology*, 13-23.
- Campbell, J. and Li, M. 2008. "Asian students' voices: An empirical study of Asian students' learning experiences at a New Zealand university," *Journal of Studies in International Education*, 12(4): 375-396.
- Dong Li, Wang Bin. 2009. "Problems and solutions for information service to foreign students in academic library," *Researches in Medical Education*, 6: 672-674.
- Geertz, C. 1991. "Common sense als kulturelles System," In *Dichte Beschreibung*, 261-288. Frankfurt: Suhrkamp.
- Guo Yan. 2009. "A Study on Library Information Service for Overseas Students," *Journal of Shangluo University*, 23(5): 93-96.
- Kano, N., Seraku, N., Takahashi, F., et al. 1984. Attractive quality and must-be quality.
- Luo Jiansheng. 2009. The Analysis of Freshmen Cultural Cause to Have Trouble Adapting to Interpersonal Communication, The Southeast University.
- Lysgaard, S. 1955. "Adjustment in a foreign society: Norwegian Fulbright grantees visiting the

United States," *International Social Science Bulletin*, 7: 45-51.

Rui, Shenghao. 2008. "Multi-cultural Communication: The Study of Communication Network of Korean Students in Shanghai," *Modern Communication (Journal of Communication University of China)*, 3: 165-166.

Ward, C., Okura, Y. and Kennedy, A. 1998. "The U-curve on trial: A longitudinal study of psychological and sociocultural adjustment during cross-cultural transition," *International Journal of Intercultural Relations*, 8: 221-291.