Higher Vocational College Service Quality in Zhuhai: Students' Perceptions according to Subject Majors

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Abstract

The concern of Service Quality has become of critical concern globally. The purpose of this study is to identify whether higher vocational college service quality differ according to the selected subject majors. Descriptive research design and quantitative method was employed in this study. Quantitative data was collected using questionnaires. The sample of the study consists of 400 second year students (200 males and 200 females) from a higher vocational college in zhuhai, Guangdong Province, China. Prior to the actual study, a pilot test was carried out to obtain the reliability and validity of the instrument. The quantitative data was analyzed using one way ANOVA analysis (Statistical Package for the Social Sciences, SPSS, version 23.0). The results show that there is a significant difference in students' perceptions of overall service quality and its three dimensions (tangibility, reliability, and responsiveness) based on their subject majors. The results also indicate that there is no significant difference exists in students' perceptions of service quality in the assurance and empathy dimensions.

Keywords: Service Quality, Students' perception, Higher Vocational College, Subject Majors

1. INTRODUCTION

1.1 Background of the study

Education has become an important business and necessity in today's society, students in higher vocational education are more concerned about service quality. At present, both private and state-owned higher vocational college attach great importance to the quality of educational services to attract students. Parasuraman, Zeithaml, and Berry (1985) found the gap model of the quality of service and put forward an instrument to calculate the service quality, which is more difficult to measure compared with goods quality, thus raising the question of "who are the customers in education".

Since the 1980s, with the development of science and technology and social production, many industries and regions in China are in urgent need of high-level technical talents, and some enterprises are seriously lacking such technical talents. With the deepening of reforms and economies opening up, the development of socialist modernization, the optimization and upgrading of industrial structure and industrial

technological innovation, there is a more urgent need for high-quality workforce, skills and talents. As such talents cannot be cultivated by a single type of education, providing new development opportunity for the higher education in vocational institution in China is seen to be the answer. In the 21st century especially, when competition among countries is more intense, it has become the consensus of all countries to strengthen the development of the higher education in vocational institution. Therefore, it is particularly important to improve the quality of the higher education in vocational institution and promote its development. Since the 21st century, the Chinese government has attached increasing importance to the reform and development of the higher education in vocational institution, and has issued and implemented a large number of policies and regulations in order to promote its rapid development. In particular, in March 2019, the Chinese government proposed to expand the enrollment of the higher vocational colleges by one million students (Gao & Yu, 2020). The government's recent efforts to expand the enrollment of the higher vocational colleges into one million are of great significance to China's commitment to this cause. Additionally, the "1 + X" model, which puts equal emphasis on academic education and skills education, may mark a new stage in the development of Chinese the higher education in vocational institution (Fan, 2020).

What was not clear was whether this dissatisfaction differed according to demographic factors such as age, gender, etc. Therefore, this study aims to examine whether the service quality provided by higher vocational colleges differ according to selected subject majors at the higher vocational college.

1.2 Hypotheses of the Study

Five null hypotheses were formulated based on the objective of the study:

Ho1:There is no significant difference in students' perceptions of overall service quality of the higher vocational college based on their subject majors.

Ho 2. There is no significant difference in students' perceptions of 'Tangibility' of the higher vocational college based on their subject majors.

Ho 3.There is no significant difference in students' perceptions of 'Reliability' of the higher vocational college based on their subject majors.

Ho 4: There is no significant difference in students' perceptions of 'Responsiveness' of the higher vocational college based on their subject majors.

Ho 5: There is no significant difference in students' perception of 'Assurance' of the higher vocational college based on their subject majors.

Ho 6: There is no significant difference in students' perception of 'Empathy' of the higher vocational college based on subject majors

2. REVIEW OF LITERATURE

2.1 Service Quality

Service quality is really a motion and activity process. According to Oldfield and Baron (2000) students typically require three dimensions to be satisfied, to wit: requisite encounters, which relate to essential conditions required to satisfy study needs, acceptable encounters (desirable but not imperative) and functional encounters (practical considerations). Parasuarman et al. (1985) conclude ten dimensions of service quality that can be generalized. The ten dimensions are as follows:

Tangibility refers to the physical proof of the service. The physical facilities, the people, the tools and the equipment which is provided for guarantee the reliability of service equipment and providing the service.

Reliability: The reliability refers to the function and reliability on consistency.

Responsiveness refers to the will or the preparation of the workers for giving services and it is based on the basic skills and knowledge from the workers or the operation supporters to give services.

Competence: It is the possession of the skills and knowledge to give the service by the contact personnel and operational support personnel

Access: It is in the contact and the approach ability

Courtesy: The courtesy is the politeness consideration,friendly faces and the attitude of respect.

Communication: The communication is about keeping the customers informed do the customers they can understand

Credibility: Credibility is honesty and trustworthiness

Security: Security means to be free from a risk. and danger. For example, the physical confidentiality and safety

Understanding: Understanding means taking efforts to understand people's needs.

The 10 factors is reorganized in the concept of the SERQUAL model (Parasuraman, Zeithaml, & Berry, 1990) which include "tangibility", "reliability", "responsiveness", "assurance", and "empathy":

(1)Tangibility

The tangibility refers to the appearance of physical facilities, the equipment and the materials for communication. All these are are provided physical hint for the corporation service. And the scale enhance the image of the corporation. So the tangible dimension is very important for the corporations. And most of most times in most scenarios the tangible equipment will be placed.

(2)Reliability

Reliability refers to the ability for giving the reliable and accurate implementation of commitments. Broadly speaking, the reliability refers to on the delivery surface, the offering of surface service to solve the problem and commitment on the price. The clients referred to cooperate on with both companies and clients with confidentiality. So the fidelity and the recognition of service quality is the most important factors in service. The service companies must know about the expectation for the credibility especially for the bank services, the reliability dimension involves the consistency, the right to know, the attitude to complaints, regularity, and accountability.

(3)Responsiveness

The responsiveness dimension refers to answering the clients acquire requests immediately and solve their complaints. It also concerns the timeliness the appearance, the behavior, the professionalism and commitment. It can be calculated by the waiting time for the customers for aids and the waiting time for answering questions . Through continuous observations of in the provided service and the attitudes of the clients, the responsiveness can be coordinated.

(4)Assurance

The fourth dimension is the assurance, it can be defined as the knowledge of the recruiters, the knowledge of the personal and the personal belief and confidence for stimulating the clients trust. And this dimension is very important in the bank business and insurances company sources. For the clients there is emphasis on the

credibility and insurance and they prefer to choose the organizations with better assurance such as the the insurance and stake brokers.

(5)Empathy

The empathy is another dimension. It can be defined as the care and personal concern on the clients and this aspect is on the purpose of delivering the unique meanings of the service through personal service. And the key point in this dimension is to catering to different peoples requirements. Under this hypothesis, the service providers need to know the personal requirements or the preferences of every customer.

2.2 Service Quality Measurement in Higher Vocational College

Service quality is defined as "a form of attitude related but not equivalent to satisfaction, and results from comparison of expectations with perceptions of performance" (Parasuraman, Zeithaml, & Berry, 1988). To assess service quality in higher education, some studies have used SERVQUAL (Service Quality) model developed by Parasuraman et al. (1988). Despite its popular application, the SERVQUAL has been criticized by some scholars for its shortcomings at both conceptual and operational levels (Buttle, 1996). To overcome the shortcomings, the SERVPERF (Service Performance) model was developed. SERVPERF is a variant of the SERVQUAL model that adopts a performance based approach to measuring service quality by focusing only on the perceptions component (Brochado, 2009; Cronin & Taylor, 1994). Despite the lack of consensus in measurement methodologies for service quality in higher education, the SERVQUAL framework has been widely recognised and applied to assess quality from the students' perspective (Twaissi & Al-Kilani, 2015). However, comparing the two most popular models, SERVQUAL and SERVPERF, research has empirically tested and proven the latter to be a better measure of service quality (Adil, Akhtar, & Khan, 2013). In addition, Dabholkar, Shepherd, and Thorpe (2000) posit that the SERVPERF model is appropriate if the objective is to determine causal relationships for service quality dimensions. Based on these reasons, the study employed the SERVPERF model to assess service quality in higher vocational college in zhuhai.

2.3 Higher Vocational College Service Quality according to Demographic Factors

Some research has been done to test demographic factors that contribute to service quality. Gao (2015) found that different student groups had different perceived satisfaction values for the same educational service. He concluded this through the analysis of 819 samples of different gender, grade, subject majors, household type, family incomes, parents' education, college entrance examination grades, and college selection reasons in private higher vocational colleges. A questionnaire survey was conducted on the perceived satisfaction status of educational service quality of students in a normal group. Rao (2015) adopted the self-made questionnaire and carried out a large-scale survey of students from 8 universities in Beijing. The results showed that college students had a high degree of satisfaction with the overall teaching conditions, teachers, and courses. The individual characteristics of college students, such as gender, grade, subject majors, and school had a significant influence on satisfaction felt in their studies. Deng and Zhao (2013) indicated that in their study the mean value of the overall importance score of higher vocational college service quality was 4.178; the mean value of male students was slightly higher than that of female students and the

mean value of freshman students was higher than that of sophomore students. The mean value of the overall satisfaction score was 3. 613. The mean value of male students was lower than that of female students and the mean value of freshman students was higher than that of sophomore students. Most of studies on which concerns that demographic factors usually focus on the learning abilities and the differences are generated from the gender difference their nationalities, and ages. But this study also determined on their subject majors can also be the influencing factors that make differences.

3. METHODOLOGY

This study used descriptive research design and quantitative method.

3.1 Research Framework
The study employed the SERVPERF model (Brochado, 2009; Cronin & Taylor, 1994) to assess service quality in higher vocational college in China. The dependent variable in this study is the overall service quality and five dimensions of service quality, namely tangibility, reliability, responsiveness, assurance and empathy.The independent variables in this study is the subject majors in the higher vocational college.

3.2 Sample
This study was conducted at a higher vocational college which is situated in zhuhai, the southern part of China. The population is about 20,000 students. Purposive sampling is used to select 400 samples, they are second year students, aged between 19 to 20 years old. The sample comprised of 200 male and 200 female students, enrolled in the academic year 2019 and from four different majors (English, Robotic, Business and Computer). From the 400 respondents in this study, 200 (50%) are male and 200 (50%) are females, 100(25%) respondents are major in English, 100 (25%) respondents are major in Robotic, 100 (25%) respondents are major in Business,100 (25%) respondents are major in Computer.

3.3 Instruments
This study used questionnaires to collect the data needed. The questionnaire design of service quality was based on the SERVPERF model (Brochado, 2009; Cronin & Taylor, 1994) for measuring students' perceptions of service quality at the college.
        Questionnaire is designed to measure students' perception of Service Quality in a higher vocational college with 30 items, including five service quality dimensions: tangibility (1-5 items), reliability (6-10 items), responsiveness (11-16 items), assurance (17-22 items), empathy (23-30 items). Questionnaire 1 used in this study are adapted from Parasuraman, Zeithaml, & Berry. (1990) with the items used extracted from Brochado (2009). Questionnaire used the 5-point Likert scales, from 1 for strongly disagree to 5 for strongly agree (strongly disagree =1, disagree =2, not sure =3, agree =4, strongly agree=5).

3.4 Data Analysis Procedures
Prior to the actual study, a pilot test was carried out to obtain the reliability and validity of the instrument. The quantitative data was analyzed through the Statistical Package for the Social Sciences (SPSS) Version 23.0. Reliability test was applied to

check the reliability of the questionnaire with the help of Cronbach Alpha. One-way
ANOVA analysis was used to find out the impact of subject majors on the overall
service quality and five dimensions (tangibility, reliability, responsiveness, assurance,
and empathy) in the higher vocational college.

4. RESULTS AND DISCUSSION

4.1 Reliability
Reliability was checked by Cronbach alpha method using SPSS software and the values
for all variables (Tangibility, Reliability, Responsiveness, Assurance, Empathy) was
found to be above the standard value of .7. It is considered that the reliability value
more than 0.7 is good and can be up to 0.6 (Malhotra & Peterson, 2005). Therefore, the
questionnaire in the current study for measuring the variable can be treated as highly
reliable.

4.2 Findings and Results

**Ho1: There is no significant difference in students' perceptions of overall
service quality of the higher vocational college based on their subject majors.**
The objective of this analysis aims to determine the difference in students' perceptions
of the overall service quality in the higher vocational college in accordance with their
subject majors. The results of One-way ANOVA in the mean on students' perceptions of
the service quality from the four different faculties are indicated in Table 1.

**Table 1: *Results of One-way ANOVA showing students' perceptions of service quality based
on subject majors***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5312.307	3	1770.769	2.828	.038
Within Groups	247995.690	396	626.252		
Total	253307.998	399			

Table 1 presented the results of One-way ANOVA, which indicate that there is a
significant difference in the mean of students' perceptions of service quality from the
four different faculties (N= 400, df= 3 , F= 2.83, p= .038). These findings reject Ho3.
Since the findings highlight that there is a significant difference, the Multiple
Comparisons analysis was carried out.

**Table 2: *Multiple Comparisons showing students' perceptions of overall service quality
based on subject majors***

(I) Major	(J) Major	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
English	Robotic	-7.06000*	3.53907	.047	-14.0177	-.1023
	Business	.26000	3.53907	.941	-6.6977	7.2177
	Computer	-7.25000*	3.53907	.041	-14.2077	-.2923
Robotic	English	7.06000*	3.53907	.047	.1023	14.0177
	Business	7.32000*	3.53907	.039	.3623	14.2777
	Computer	-.19000	3.53907	.957	-7.1477	6.7677
Business	English	-.26000	3.53907	.941	-7.2177	6.6977
	Robotic	-7.32000*	3.53907	.039	-14.2777	-.3623
	Computer	-7.51000*	3.53907	.034	-14.4677	-.5523
Computer	English	7.25000*	3.53907	.041	.2923	14.2077

Robotic	.19000	3.53907	.957	-6.7677	7.1477
Business	7.51000*	3.53907	.034	.5523	14.4677

*. The mean difference is significant at the 0.05 level.

Findings from Multiple Comparisons in Table 2 indicate that the mean scores of
English students are significantly lower than the Robotic students (Mean Difference=-
7.06, p=.047) and the Computer students (MD= -7.25, p= .041) in overall service quality;
the mean scores of Business students are significantly lower than the Robotic students
(MD= -7.32, p= .039) and the Computer students (MD= 7.51 p= .034) in overall service
quality. The mean scores of English students and Business students are not significant
(MD= -.26, p= .941). The mean scores of Robotic students and Computer students are
also not significant (MD= .19 p= .957) in overall service quality.

**Ho 2. There is no significant difference in students' perceptions of
'Tangibility' of the higher vocational college based on their subject majors.**
The investigation aims to determine the difference in students' perceptions of the
tangibility dimension of service quality in the higher vocational college on the basis of
subject majors. The results of One-way ANOVA of students' perceptions of the
tangibility dimension of service quality from the four different faculties are found in
Table 3.

**Table 3: *One way ANOVA for students' perceptions of 'Tangibility' dimension of service
quality based on subject majors***

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	238.510	3	79.503	4.000	.008
Within Groups	7871.240	396	19.877		
Total	8109.750	399			

Table 3 show the results of One-way ANOVA which indicate that there exists a
significant difference in student's perceptions of the 'Tangibility' dimension of service
quality based on subject majors (N= 400, df= 3, F= 4.00, p=.008). These findings reject
Ho3a and answer RQ3a. Since the findings highlight that there is a significant
difference, the Multiple Comparisons analysis was performed.

**Table 4: *Multiple Comparisons showing 'tangibility' dimension of service quality in higher
vocational college based on subject majors***

Subject Major	Subject Major	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
English	Robotic	-1.72000*	.63051	.007	-2.9596	-.4804
	Business	-.10000	.63051	.874	-1.3396	1.1396
	Computer	-1.44000	.63051	.023	-2.6796	-.2004
Robotic	English	1.72000*	.63051	.007	.4804	2.9596
	Business	1.62000	.63051	.011	-.3804	2.8596
	Computer	.28000	.63051	.657	-.9596	1.5196
Business	English	.10000	.63051	.874	-1.1396	1.3396
	Robotic	-1.62000	.63051	.011	-2.8596	-.3804
	Computer	-1.34000	.63051	.034	-2.5796	-.1004
Computer	English	1.44000	.63051	.023	.2004	2.6796
	Robotic	-.28000	.63051	.657	-1.5196	.9596
	Business	1.34000	.63051	.034	.1004	2.5796

*. The mean difference is significant at the 0.05 level.

Table 4 indicates that the mean score of English students is significantly lower than that of Robotic students (MD= -1.72, p= .007) and the Computer students (MD= -1.44, p= .023) on the tangibility dimension of service quality. The mean score of Business students is significantly lower than that of Robotic students (MD= -1.62, p= .011) and the Computer students (MD= -1.34, p= .034) on the tangibility dimension of service quality.

The mean score for English students and Business students is not significant (MD= -.1, p= .874). The mean score of Computer students and Robotic students is also not significant (MD= -.28, p= .657) in the tangibility dimension of service quality.

Ho 3.There is no significant difference in students' perceptions of 'Reliability' of the higher vocational college based on their subject majors.

The purpose of this analysis was to see the differences in students' perceptions of the reliability dimension of service quality in the higher vocational college on the basis of subject majors. The results of One-way ANOVA in students' perceptions of the reliability dimension of service quality from the four different faculties are shown in Table 5.

Table 5: *One way ANOVA test showing* **'Reliability' dimension of service quality** *in higher vocational college based on subject majors*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	199.170	3	66.390	3.489	.016
Within Groups	7535.540	396	19.029		
Total	7734.710	399			

Findings from the One way ANOVA (Table 4.15) specify that there is a significant difference in the 'Reliability' dimension of service quality based on subject majors (N= 400, df= 3 , F= 3.489, p= .016<0.05). These findings reject Ho3b and answer RQ3b. Since the findings indicate that there exists a significant difference, the Multiple Comparisons analysis was carried out.

Table 6: *Multiple Comparisons on 'Reliability' dimension of service quality in higher vocational college based on subject majors*

Subject Major	Subject Major	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
English	Robotic	-1.26000	.61691	.042	-2.4728	-.0472
	Business	.03000	.61691	.961	-1.1828	1.2428
	Computer	-1.51000	.61691	.015	-2.7228	-.2972
Robotic	English	1.26000	.61691	.042	.0472	2.4728
	Business	1.29000	.61691	.037	.0772	2.5028
	Computer	-.25000	.61691	.686	-1.4628	.9628
Business	English	-.03000	.61691	.961	-1.2428	1.1828
	Robotic	-1.29000	.61691	.037	-2.5028	-.0772
	Computer	-1.54000	.61691	.013	-2.7528	-.3272
Computer	English	1.51000	.61691	.015	.2972	2.7228
	Robotic	.25000	.61691	.686	-.9628	1.4628
	Business	1.54000	.61691	.013	.3272	2.7528

*. The mean difference is significant at the 0.05 level.

Table 6 highlight that the mean score of English students is significantly lower in
comparison to Robotic students (MD= -1.26, p= .042) and the Computer students (MD=
-1.51, p= .015) for service quality's reliability dimension, the mean score of Business
students is significantly lower than that of Robotic students (MD= -1.29, p= .037) and
the Computer students (MD= -1.54, p= .013). The mean scores for English students and
Business students are not significant (MD= .03, p= .961) for the service quality's
reliability dimension, the mean scores of Computer students and Robotic students are
also not significant (MD= .25, p= .686).

**Ho 4: There is no significant difference in students' perceptions of
'Responsiveness' of the higher vocational college based on their subject
majors.**

The purpose of this analysis was to see the difference in students' perceptions of the
responsiveness dimension of service quality in the higher vocational college according to
their subject majors. The results of One-way ANOVA in students' perceptions of the
responsiveness dimension of service quality from the four different faculties are shown
in Table 7.

Table 7: *One way ANOVA test showing 'Responsiveness' dimension of service quality in
higher vocational college based on subject majors*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	258.210	3	86.070	3.168	.024
Within Groups	10758.180	396	21.167		
Total	11016.390	399			

Findings from the One way ANOVA, Table 4.17 specify that there is a significant
difference in the 'Responsiveness' dimension of service quality based on subject majors
(N= 400, df= 3 , F= 3.168, p= .024<0.05). These findings reject Ho3c and answer RQ3c.
Since the findings indicate that there exists a significant difference, the Multiple
Comparisons analysis was carried out.

Table 8: *Multiple Comparisons on 'Responsiveness'* dimension *of service quality based on
subject majors*

Subject Major	Subject Major	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
English	Robotic	-1.46000	.73712	.048	-2.9092	-.0108
	Business	.09000	.73712	.903	-1.3592	1.5392
	Computer	-1.65000	.73712	.026	-3.0992	-.2008
Robotic	English	1.46000	.73712	.048	.0108	2.9092
	Business	1.55000	.73712	.036	.1008	2.9992
	Computer	-.19000	.73712	.797	-1.6392	1.2592
Business	English	-.09000	.73712	.903	-1.5392	1.3592
	Robotic	-1.55000	.73712	.036	-2.9992	-.1008
	Computer	-1.74000	.73712	.019	-3.1892	-.2908
Computer	English	1.65000	.73712	.026	.2008	3.0992
	Robotic	.19000	.73712	.797	-1.2592	1.6392
	Business	1.74000	.73712	.019	.2908	3.1892

*. The mean difference is significant at 0.05 level

Table 8 highlights that the mean score of English students is significantly lower than that of Robotic students (MD= -1.46, p= .048) and the Computer students (MD= -1.65, p= .026) for the responsiveness dimension of service quality. The mean score of Business students is significantly lower than that of Robotic students (MD= -1.55, p= .036) and the Computer students (MD= -1.65, p= .026). The mean score for English students and Business students is not significant (MD= .09, p= .903) in the responsiveness dimension of service quality; the mean score of Computer students and Robotic students is also not significant (MD= .19, p= .797).

Ho 5: There is no significant difference in students' perception of 'Assurance' of the higher vocational college based on their subject majors.

The objective of this investigation was to see the difference in students' perceptions of the assurance dimension of service quality in the higher vocational college in accordance with subject majors. The results of One-way ANOVA in students' perceptions of the assurance dimension of service quality from the four different faculties are shown in Table 4.20.

Table 9: *One way ANOVA test showing 'Assurance' of service quality in higher vocational college based on subject majors*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	136.740	3	45.580	1.761	.154
Within Groups	10252.020	396	25.889		
Total	10388.760	399			

Findings from the one way ANOVA, Table 4.19 exhibit that there is no significant difference between the mean scores of the 'Assurance' dimension of service quality based on subject majors (N= 400, df= 3 , F= 1.761, p= .154>0.05). These findings fail to reject Ho3d. Since the findings show no significant difference, Multiple Comparisons were not carried out.

Ho 6: There is no significant difference in students' perception of 'Empathy' of the higher vocational college based on subject majors.

The purpose of this analysis was to see the difference in students' perceptions of the empathy dimension of service quality in higher vocational college on the basis of their subject majors. The results of One-way ANOVA in students' perceptions of the empathy dimension of service quality from the four different faculties are shown in Table 10.

Table 10 *One way ANOVA test showing 'Empathy' dimension of service quality in higher vocational college based on subject majors*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	266.527	3	88.842	1.792	.148
Within Groups	19629.470	396	49.569		
Total	19895.997	399			

Findings from the one way ANOVA, Table 4.20 exhibit that there is no significant difference between the mean scores on the 'Empathy' dimension of service quality based on subject majors (N= 400, df= 3 , F= 1.792, p= .148>0.05). These findings fail to reject

Ho3e and answer RQ3e. Since the findings show no significant difference, Multiple Comparisons were not carried out.

5. CONCLUSION

In conclusion, the findings of the one-way ANOVA test revealed significant differences in assessments of overall service quality and its dimensions (tangibility, reliability, and responsiveness) among subject majors. The findings also indicated that Engineering students (Robotics and Computer) had significantly higher mean scores than the Liberal arts students (English and Business) in their perceptions of overall service quality and the three dimensions of tangibility, reliability and responsiveness. In this regard, Engineering students majoring in robotics and computers have obtained significantly higher scores compared with liberal arts students (majoring in English and business) in their perceptions of overall service quality in education and its three dimensions (tangibility, reliability, responsiveness). The findings of the present study are also supported by previous studies, indicating that students' fields of study greatly affect their perceptions of service quality in China. Zhu's (2016) study indicated significant differences in students' perceptions of service quality between different faculties in Shantou University. In addition, Gao (2015) also found that Engineering students had significantly higher perceptions of service quality compared with Liberal arts students in a higher vocational college. Similarly, the study by Rao (2015) revealed that engineering students tended to be more satisfied with the overall teaching, teachers and course in higher vocational college. This may be because compared with the Liberal arts students, engineering majors are professionals and place more emphasis on practical and operational learning. After a period of learning, students can obviously feel the gains, so the satisfaction of teachers, curriculum and teaching is also higher. Therefore, the higher vocational college should pay attention to the Liberal art students in their service quality. It is not enough to concentrate on key discipline areas (robotic and computer), but also to improve the development of other disciplines (English and business), especially in the tangibility, reliability and responsiveness dimensions of service quality in the higher vocational college.

However, there are still some limitations in this study. This is a quantitative study, only using questionnaire to collect the data. As such, it is hoped that future researchers will also use qualitative data from semi-structured interviews.Students can also give some suggestions on how to improve the service quality in higher vocational colleges in China.

REFERENCES

1. Adil, M., Akhtar, A., & Khan, M. N. (2013). Refinement of internet banking service quality scale: a confirmatory factor analysis approach. *International Journal of Services and Operations Management*, *14*(3), 336-354.
2. Buttle, F. (1996). SERVQUAL: Review, Critique, Research Agenda. European *Journal of Marketing*, *30*(1), 8-32. doi: 10.1108/03090569610105762
3. Cronin Jr, J. J., & Taylor, S. A. (1994). SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of marketing*, *58*(1), 125-131.

4. Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. (2000). A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of retailing, 76*(2), 139-173.

5. Fan, X. X. (2020). Policy-driven development and the strategic initiative of one-million enrollment expansion in China's higher vocational education. *ECNU Review of Education*, *3*(1), 179-186.

6. Gao, H. Q. (2015). Research on the satisfaction of different student groups on the service quality of private higher vocational education. *China Vocational and Technical Education*, (32), 5.

7. Gao, Z., & Yu, T. (2020). Research on the development of higher vocational education in China in the 21st Century. *In 4th International Conference on Culture, Education and Economic Development of Modern Society (ICCESE 2020)* (pp. 742-745). Atlantis Press.

8. Oldfield, B. M., & Baron, S. (2000). Student perceptions of service quality in a UK university business and management faculty. *Quality Assurance in Education*, *8*(2), 85-95.

9. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. Journal of Marketing, *49*(4), 41-50.

10. doi:10.1177/002224298504900403

11. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. Journal of Retailing, *64*(1), 12-40.

12. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1990). Five imperatives for improving service quality. Sloan Management Review, *31*(4), 29-38.

13. Rao, Y. T. (2015). Analysis of the Influencing Factors of College Students' Satisfaction with Studying: Based on a Survey of Eight Universities in Beijing. *University: Research*, (8), 11.

14. Twaissi, N. M., & Al-Kilani, M. H. (2015). The impact of perceived service quality on students' intentions in higher education in a Jordanian governmental university. *International Business Research, 8*(5), 81.

15. Zhao, H. Q., & Deng, F. M. (2013). A survey on the importance of factors affecting the teaching quality of higher vocational education and a survey of students' satisfaction—taking higher vocational colleges in Shaanxi Province as an example. *Educational Exploration*, (5), 2.

16. doi:10.3969/j.issn.1002-0845.2013.05.038

17. Zhu, J. (2016). *Research on students' satisfaction from the perspective of higher education service quality: Taking Shantou University as an example* (Doctoral dissertation). Shantou University, Shantou, Guangdong, China.