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Impacting Factors of Student Satisfaction and Loyalty: A Case Study of Private Universities in Zhejiang, China

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Abstract

Purpose: This paper mainly studies the factors impacting student satisfaction and loyalty of private universities in Zhejiang, China. A conceptual framework was built upon the relationship between academic aspects, teachers and teaching, college administration, placement services, infrastructure facilities, student satisfaction and student loyalty. **Research design, data and methodology:** The sample is 500 undergraduates from two private universities in Zhejiang Province, who are studying English, Computer Science and Accounting. Nonprobability and probability samplings are including purposive sampling, stratified random sampling and convenient sampling. The validity and reliability test were employed before the data collection, approved by the item-objective congruence (IOC) index Cronbach's Alpha coefficient values of pilot test. The data were analyzed by Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA). **Results:** Research shows that teachers and teaching, infrastructure facilities, academic aspects and placement services significantly impact student satisfaction. Student satisfaction has an impact on student loyalty. On the contrary, the relationship between college administration and student satisfaction was not supported. **Conclusions:** Based on the findings, educational institutions can enhance student satisfaction and loyalty by the improvement of significant factors such as academic aspects, teachers and teaching, placement services, infrastructure facilities. Furthermore, future researchers should explore the insignificant of college administration.

Keywords: Higher Education, Student Satisfaction, Student Loyalty, Teaching, China.

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The core of social development is education, which helps to promote good civic behavior, economic growth, and social harmony. At the same time, with the development of society, higher education has gradually become a "product" to flourish people's knowledge (Sahney et al., 2008). Therefore, higher education needs to pursue learners' high performance and satisfaction. In addition, higher education

can uplift the development of social economy by promoting the development of individuals' ability and intelligence (Tanmay, 2011). The ultimate factor impacting higher education is service quality (O'Neill & Palmer, 2004; Parri, 2006). As higher education becomes more and more important to the country development, universities, as the primary body of higher education, is very important to

cultivate high-quality talents to meet the needs of society.

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Moreover, with the evolution of higher education into “products”, how to retain excellent customer resources has become the primary goal of universities. They believe that the quality of services provided to customers or students directly impacts the sustainability of higher education (Yeo, 2008).

Martirosyan (2015) pointed out that the importance of student satisfaction has reached an all-time high in recent years. Facing the increasing competitive environment, universities need to push effort to improve products and service quality to ensure students’ satisfaction. Student satisfaction can not only strategize universities to transform in the change environment, but also improve the its management and service quality. Researches show that the service quality in higher education is the most important factor impacting students’ satisfaction (Yeo, 2008).

For higher education management, it is crucial to understand the factors that impact student loyalty. According to Rojas-Méndez et al. (2009), loyal students are more likely to have a strong bond with their alma mater after graduation, and they tend to choose the school for their future education. Additionally, Ali et al. (2016) pointed out that these loyal students will have a high probability of donating to their alma mater in the future, and will recommend the school to the people around them and endorse the brand image and reputation.

In China, recently, there are many scholars begin to pay attention to study the factors impacting student satisfaction and loyalty. In the report released by the Ministry of education of the people’s Republic of China in 2015, it pointed out that according to the questionnaire survey of 27,134 students in 155 newly-built universities. Statistics show that 46.71% of the students in these universities are highly satisfied with the education and teaching quality of the school, and 39.9% of the students are moderately satisfied. Based on these two indicators, the overall satisfaction of students with the quality of education is 86.61%. Understanding the influencing factors of student satisfaction and loyalty has become the focus of contemporary university research.

2. Literature Review

2.1 Academic Aspects

Academic satisfaction means the degree of enjoyment and satisfaction experience as a student. The factors impacting students’ academic satisfaction are theoretical and educational quality, performance evaluation process, and socialization (Hakim, 2013). Academic satisfaction is a main evaluation of control teaching quality. Evaluating academic aspects is an effective method for universities to

monitor students’ learning performance and satisfaction (Shakurnia et al., 2013).

Abdullah (2005) conducted the survey to examine the determinants of student satisfaction mainly include the curriculum, enrollment, academic and non-academic aspects and reputation. Afzal et al. (2010) divided the quality of higher education service into several aspects, including planning, academic, approval etc. In academic terms, students believe that teaching quality, curriculum and university reputation are important factors impacting their satisfaction with the service quality of higher education (Gamage et al., 2008).

Mai (2005) attempted to figure out in the level of satisfaction, whether there were big differences between British and American students, and what factors impact student satisfaction. The investigators randomly selected business school students from 20 British and 20 American universities. The results revealed that student satisfaction was driven by various academic aspects such as d quality of academic staff, quality of programs, and university reputation. Hence, this study hypothesizes that:

H1: Academic aspects have a significant impact on student satisfaction.

2.2 College Administration

Arif et al. (2013) pointed out that administration is a management activity of social affairs which is the main component of some organizations or institutions. Administrative services contribute to the establishment of core services which customers usually engage. It includes three topics which are customers’ views on administrative service quality and reliability, administrative operation and client communication (Dagger et al., 2007).

Kang and Sharma (2010) investigated education management quality in Punjab province. One of the decisive factors is the lack of attention to extracurricular activities, which is negatively related to the quality of education management. Gamage et al. (2008) examined the development process high-quality services is whether students can establish a good relationship and interaction with academic staff, which managers should always pay attention to. In addition, Hanssen and Solvol (2015) determined that university administrators should put pressure on local political staff to support students’ wishes and needs as the first consideration, because the student satisfaction directly impact the organization development.

Daniel et al. (2017) studied the relationship between student satisfaction and administrative support services in Ethiopia and concluded that more than half of the students were satisfied with the administrative services of the university. Yusoff et al. (2015) stressed that business university student satisfaction is impacted by various

aspects which are tuition, textbooks and several kinds of college administration. Therefore, this study also hypothesizes the relationship between college administration and student satisfaction as follows:

H2: College administration has a significant impact on student satisfaction.

2.3 Infrastructure Facilities

Kärnä and Julin (2015) defined that the quality of facilities in the university is regarded as the availability and completeness of some equipment, such as classroom equipment, library facilities, various laboratories, public places, dormitory facilities and student canteens. Infrastructure, as a tangible asset, is related to the physical aspects of an organization or institution. The physical facilities of the university include classrooms, structures, libraries, registries, IT services and dormitories (Nadiri et al., 2009). Facilities of the university contains classroom equipment, library equipment resources, software services, economic assistance services, consulting services, sports equipment and fitness equipment (Nasser et al., 2008).

The basic content of university functions is to provide good infrastructure for students and faculty. Good infrastructure and effective management of administrators will help the university to achieve its goal (Kärnä et al., 2013). According to Price et al. (2003), university facility is an important consideration when students choose universities. In addition, university infrastructure will also impact students' views on the reputation and image of the university (Nguyen & LeBlanc, 2001). On the contrary, Hassanbeigi and Askari (2010) believed that poor infrastructure weakens students' learning motivation and damage students' satisfaction with their universities. University facilities are not only conducive to attracting new students, but also to building a good learning environment. Excellent university facilities impact on students' choice, learning effectiveness and satisfaction. This is a key factor that distinguishes them from other universities (Weerasinghe & Fernando, 2018).

The research studied by Ijaz et al. (2011) shows that infrastructure impacts student satisfaction and their relationship is positively correlated. Another study suggested that while improving student satisfaction and learning opportunities, we should also pay attention to the role of infrastructure (Jenssen et al., 2010). In addition, learning resources are impacted by the availability of laboratories which are modernization, equipment and innovative teaching and research works. These facilities are regarded as classroom facilities which positively impact student satisfaction (Butt & Rehman, 2010).

H3: Infrastructure facilities have a significant impact on student satisfaction.

2.4 Placement Services

According to Grönroos (2002), placement services are considered to be the management between students and universities to the final stage, in which the relationship can be extended to other entities. Actually, placement services can save time and cost to develop training to be more in line with the actual needs of professional work. To some extent, placement can be regarded as a necessary service of education. Placement is an auxiliary service through internships, activities, meetings, etc. The success rate of placement can enhance an institution's competitiveness and is the main purpose to enrich the service contents of the organization (Pencarelli et al., 2013). The meaning of employment refers to the migrant work engaged by workers within the legal age in order to obtain remuneration (O'Driscoll, 2012).

Through placement services, universities may provide higher value to stakeholders. For example, they add career development activities and provide students with necessary support for not only to obtaining degrees, but also life skills (Pencarelli et al., 2013). At present, there is not many literatures of placement services, and more research is needed in this field (Ryan et al., 1996). Dearing (1997) stressed that employers are not very strict with students in terms of work experience. Sojkin et al. (2012) investigated the factors behind students' choice of universities after high school. Placement opportunity is one of the main factors for students to choose this institution. Gruber et al. (2010) stated that the impact of placement services on student satisfaction is positive and significant. Thus, a hypothesis is developed:

H4: Placement services have a significant impact on student satisfaction.

2.5 Teachers and Teaching

Douglas et al. (2006) refers teaching to the purposeful learning activities and teachers' guidance for students. The essence of teaching includes teachers and students, and it is a unified organic combination of knowledge transfer (Ali et al., 2016). Aldridge and Rowley (1998) stressed that the evaluation of student satisfaction can be divided into two forms; teachers' teaching, and students' overall feelings and experiences. Good interaction between teachers and students can be built from the efficient teaching quality provided by teachers, which help to improve students' positive feelings and satisfaction (Umbach & Wawrzynski, 2005). In addition, it was pointed out that core service of higher education is efficient teaching quality, which plays a major role in the satisfaction of the overall quality (Bigne et al., 2003).

Pozo Munoz et al. (2000) indicated that teachers are the main role and have direct impact on student satisfaction with education service. Moreover, the researchers found that

student satisfaction have a significant positive effect on teaching practice (Gruber et al., 2010). In a survey on students' satisfaction in British universities, (Douglas et al., 2008) concurred that teaching is the most important factor impacting student satisfaction. It is therefore hypothesized that:

H5: Teachers and teaching have a significant impact on student satisfaction.

2.6 Student Satisfaction

Satisfaction is defined as the state that a person's feeling after experiencing a product, service or a result that meets his or her anticipations (Arif & Ilyas, 2013). Marzo Navarro et al. (2005) stated that satisfaction has also been taken seriously in the university, some studies show that the satisfaction of students is a sophisticated concept, which is composed of a lot of dimensions (Hok et al., 2021). Mahapatra and Khan (2007) developed a system integration method for simulating customer service quality evaluation of technical education system through an investigation tool called Edu QUAL proposed by the education department. In addition, Senthilkumar and Arulraj (2011) recently studied this problem in order to measure the quality of higher education, developing a model, called "SQM-HEI" (Service Quality Measurement in Higher Education in India). The model mainly studies three dimensions which are teaching method, learning environment, and education quality (Annamdevula & Bellamkonda, 2016).

Caruana (2002) highlighted that satisfaction plays an intermediary role in the impact of the quality of customer service on loyalty. In a long term, loyalty is positively correlated with the improvement of customer or student satisfaction and performance that determine institutions' profitability (Helgesen & Nettet, 2007). Kahneman (2011) emphasized that loyalty is an outcome of students' selections of universities for their future study. Accordingly, a hypothesis is made:

H6: Student satisfaction has a significant impact on student loyalty.

2.7 Student Loyalty

According to the literature from Ganesh et al. (2000), recent studies believe that loyalty is composed of behavior dimension such as attitude loyalty, civic behavior, complaints. Therefore, we can see that the types of loyalty may be different, and customers or students will express their loyalty in many ways. Similarly, student loyalty includes their attitudes and behaviors (Hennig-Thurau et al., 2001). Fernandes et al. (2013) noted that loyalty is a long-term relationship developed by graduates after graduation, including word of mouth, satisfaction, institutional

cooperation, donation, graduate placement and competitiveness, potential students, reputation and cost performance. Researches show that loyalty is related to suppliers, shops, products, brands and organizations (Helgesen & Nettet, 2011).

Hennig-Thurau et al. (2001) acknowledged that student loyalty includes attitudinal and behavior factors. Attitude factors are composed of three parts; cognitive, emotional and desire factors. Behavioral factors demonstrate as outcome or action in terms of recommendation or enrollment. Student loyalty is related not only to the time when students officially attend school, but also to the time when students complete their studies. In addition, students' loyalty may be related to the universities of their learning and service experience (Neset & Helgesen, 2009). Student loyalty is not a short-term emotion. Graduated students can be more critical than those in school who can spread good stories and experience to prospective students and their social group (Helgesen & Nettet, 2007).

3. Conceptual Framework

Three theoretical frameworks constitute the conceptual framework of this study. Firstly, Ali et al. (2016) mainly discussed the causal relationship between academic aspects student satisfaction and student loyalty. Secondly, Kaur and Bhalla (2018) concluded that placement services infrastructure facilities and college management impact student satisfaction. Finally, Arif et al. (2013) discussed the relationship between teachers and teaching and student satisfaction. Accordingly, the conceptual framework of this paper is shown in Figure 1.

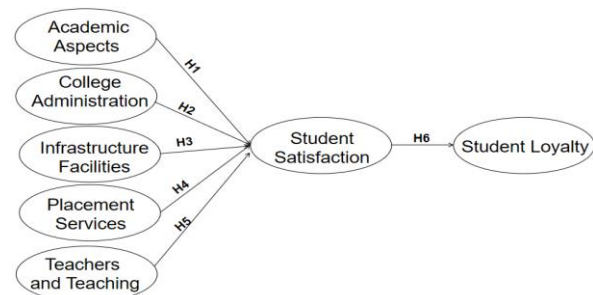


Figure 1: Conceptual Framework

Source: Created by the author.

H1: Academic aspects have a significant impact on student satisfaction.

H2: College administration has a significant impact on student satisfaction.

H3: Infrastructure facilities have a significant impact on student satisfaction.

H4: Placement services have a significant impact on student satisfaction.

H5: Teachers and teaching have a significant impact on student satisfaction.

H6: Student satisfaction has a significant impact on student loyalty.

4. Research Methods and Materials

4.1 Research Methodology

This quantitative study distributed offline and online questionnaires to 500 undergraduates from two private universities in Zhejiang, China, who are studying in three majors, English, Computer Science and Accounting. Three sections are composed of a questionnaire which are screening questions, five-point Likert scale of measuring items and demographic profiles. The pre-analysis of data is the test of validity and reliability. The index of item-objective congruence (IOC) involved three experts, resulting all items were approved at a score 0.67 or above. Later, Cronbach's Alpha was used test the validity of constructs in the pilot test of 30 participants, resulting with all internal consistency of all constructs were acceptable at a score 0.70 or above (Nunnally & Bernstein, 1994). The final questionnaire was distributed to 500 students. The data were analyzed by SPSS and SPSS Amos to detect the relationship between variables, applying confirmatory factor analysis (CFA) and structural equation model (SEM).

4.2 Population and Sample Size

The target population is undergraduates from two private universities in Zhejiang, China, who are studying in three majors, English, Computer Science and Accounting. The minimum sample size is recommended to be between 30 and 500 (Hair et al., 2007). Therefore, the researcher decided the to collect 500 samples per appropriate.

4.3 Sampling Techniques

Probability and nonprobability samplings were accounted with purposive, stratified random and convenience samplings. Firstly, purposive sampling was employed by selecting undergraduates from two private universities in Zhejiang, China, who are studying in three majors, English, Computer Science and Accounting. Secondly, stratified random sampling was to calculate the sample size of each major, as shown Table 1. Thirdly, convenient sampling was the data collection via offline and online survey methods. The data were collected from March to August 2022. Questionnaire star software was built and

used for online survey distribution, and paper survey was distributed through administration offices.

Table 1: Sample Units and Sample Size

Three Main Subjects	Population Size of Private university students	Proportional Sample Size
English	778	142
Accounting	1167	213
Computer science	790	145
Total	2735	500

Source: Created by the author.

5. Results and Discussion

5.1 Demographic Information

Questionnaires were distributed and collected among 500 students in private universities. According to Table 2, the majority is male with 39.4% (197), whereas female is 60.6% (303). The age profile shows that most of the respondents were in the age group of 20-21 with 40.8% (204) of total respondents. The majority of respondents' current year of study was freshmen with 40.2% (201). Most respondents understood about education system quite clear. In the field of concern, students mostly concerned academic aspects accounted for 21.6% (108).

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	%
Gender	Male	197	39.4%
	Female	303	60.6%
Age	18-19 years old	78	15.6%
	20-21 years old	204	40.8%
	22-23 years old	195	39.0%
	24-25 years old	23	4.6%
Year of Study	Freshman	201	40.2%
	Sophomore	174	34.8%
	Junior	88	17.6%
	Senior	37	7.4%
Understanding of education system	Unclear	74	14.8%
	Little	172	34.4%
	Quite	168	33.6%
	Clear	86	17.2%
Areas of concern	Academic aspects	108	21.6%
	Placement services	103	20.6%
	Administration system	78	15.6%
	Teachers and teaching	75	15.0%
	Infrastructure facilities	104	20.8%
	Others	21	4.2%
	Not concerned	11	2.2%

Source: Created by the author.

5.2 Confirmatory Factor Analysis (CFA)

According to Jöreskog and Sörbom, 1993), CFA can be used to test convergent and discriminant validities of the measurement models. According to Fornell and Larcker

(1981), the factor loading should be higher than 0.5, and the p-value should be lower than 0.05. The extracted variance extracted (AVE) should be higher than 0.5 and the composite reliability should be higher than 0.7. It can be seen from table 3 that all results meet the conditions.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Academic Aspects (AA)	Kaur and Bhalla (2018)	6	0.916	0.777-0.853	0.916	0.646
College Administration (CA)	Kaur and Bhalla (2018)	4	0.899	0.807-0.859	0.900	0.692
Infrastructure Facilities (IF)	Kaur and Bhalla (2018)	7	0.949	0.744-0.909	0.950	0.731
Placement Services (PS)	Kaur and Bhalla (2018)	4	0.922	0.816-0.951	0.924	0.753
Teachers and Teaching (TT)	Arif <i>et al.</i> (2013)	6	0.912	0.709-0.918	0.913	0.639
Student Satisfaction (SS)	Ali <i>et al.</i> (2016)	5	0.935	0.820-0.913	0.936	0.745
Student Loyalty (SL)	Ali <i>et al.</i> (2016)	3	0.853	0.809-0.822	0.855	0.663

Source: Created by the author.

In this study, the measurement model was tested by goodness of fit using CMIN/DF, GFI, CFI, NFI, AGFI, TLI and RMSEA. As of Table 4, all results were acceptable and in harmony with empirical data.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/df	< 5.00 (Awang, 2012)	1451.462/539 or 2.693
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.852
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.827
NFI	≥ 0.80 (Wu & Wang, 2006)	0.901
CFI	≥ 0.80 (Bentler, 1990)	0.935
TLI	≥ 0.80 (Sharma <i>et al.</i> , 2005)	0.928
RMSEA	< 0.08 (Pedroso <i>et al.</i> , 2016)	0.058
Model Summary		In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, IFI = Incremental Fit Indices, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

Source: Created by the author

According to Fornell and Larcker (1981), the discriminant validity is acceptable when the square root of the average variance extracted is larger than the coefficient of other related structures. As shown in Table 5, convergent and discriminant validities were adequate.

Table 5: Discriminant Validity

Variable	AA	CA	IF	PS	TT	SS	SL
AA	0.804						
CA	0.074	0.832					
IF	0.035	0.518	0.855				

PS	0.431	0.088	0.020	0.868			
TT	0.497	0.062	0.022	0.334	0.799		
SS	0.521	0.078	0.128	0.423	0.459	0.863	
SL	0.236	0.058	0.029	0.251	0.249	0.338	0.814

Source: Created by the author.

5.3 Structural Equation Model (SEM)

SEM has been mainly used to validate a structural model and its significant level in a structural pathway (Baumgartner & Homburg, 1996). Table 6 shows the acceptable criteria for each fit index in SEM. The results were CMIN/DF=2.772, GFI=0.851, AGFI=0.829, NFI=0.896, CFI=0.931, TLI=0.925 and RMSEA=0.060, showing that the model meets the goodness of fit.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/df	< 5.00 (Awang, 2012)	1521.691/549 or 2.772
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.851
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.829
NFI	≥ 0.80 (Wu & Wang, 2006)	0.896
CFI	≥ 0.80 (Bentler, 1990)	0.931
TLI	≥ 0.80 (Sharma <i>et al.</i> , 2005)	0.925
RMSEA	< 0.08 (Pedroso <i>et al.</i> , 2016)	0.060
Model Summary		In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, IFI = Incremental Fit Indices, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

Source: Created by the author

5.4 Research Hypothesis Testing Result

The results of six hypotheses are explicated with standardized paths coefficients (β) and $p < 0.05$ as shown in Table 7.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: AA→SS	0.351	7.801*	Supported
H2: CA→SS	-0.056	-1.308*	Not Supported
H3: IF→SS	0.146	3.484*	Supported
H4: PS→SS	0.241	5.630*	Supported
H5: TT→SS	0.266	6.241*	Supported
H6: SS→SL	0.344	6.800*	Supported

Note: * $p < 0.05$

Source: Created by the author.

The results in Table 7 can be elaborated as follows;

H1 supports academic aspects have the strongest impact on student satisfaction with $\beta = 0.351$ and t-value = 7.801. Many scholars have a consensus with this result (Kanan & Baker, 2006; Wilkins & Balakrishnan, 2013; Yusoff et al., 2015). In academic aspects, students believe that teaching quality, curriculum and university reputation are seen education service quality which can determine their satisfaction.

For H2, it shows that college administration has no significant impact on student satisfaction with $\beta = -0.056$ and t-value = -1.308. The result opposes with earlier studies that administration is a crucial management activity that drives student satisfaction (Dagger et al., 2007; Gamage et al., 2008; Kang & Sharma, 2010). It can be assumed that students have not many chances to interact with academic staff. Thus, they view that it is not critical or should have a major impact on their satisfaction.

H3 affirms that infrastructure facilities have significant impact on student satisfaction with $\beta = 0.146$ and t-value = 3.484, as aligned with many studies (Arambewela & Hall, 2009; Ijaz et al., 2011; Yusoff et al., 2015). Facilities of the university such as classroom, library, IT services, consulting services, sports and fitness etc. can greatly enhance their work and study life which majorly impact their satisfaction.

H4 reveals that placement services significantly impact student satisfaction with $\beta = 0.241$ and t-value = 5.630. Previous literatures confirmed of this relationship (Gruber et al., 2010; Pencarelli et al., 2013; Walsh & Byrne, 2013). Placement services are crucial service of education institutes. Student satisfaction can be determined by how a university helps them to develop their career after graduation.

H5 confirms the significant impact of teachers and teaching on student satisfaction with $\beta = 0.266$ and t-value = 6.241 as evidenced from numerous researchers (Douglas et al., 2008; Pozo Munoz et al., 2000; Wiers Jensen et al.,

2002). Students evaluate their satisfaction mostly from teachers and their teaching proficiency. Good relationship between teachers and students can be built from the efficient teaching quality provided by teachers, which help to improve students' positive feelings and satisfaction.

In H6, the relationship between student satisfaction and student loyalty was supported with $\beta = 0.344$ and t-value = 6.800. A number of research agreed with the result (Caruana, 2002; Chaudhuri & Holbrook, 2001; Marzo Navarro et al., 2005). It was confirmed that student satisfaction can nurture student loyalty to develop a life time relationship with universities through positive word of mouth, financial contribution, being an alumni member and placement their future heir to attend the same school.

6. Conclusions and Recommendation

6.1 Conclusion

This research accomplishes to determine the factors impacting student satisfaction and loyalty of private universities in Zhejiang, China. A conceptual framework was built upon the relationship between academic aspects, teachers and teaching, college administration, placement services, infrastructure facilities, student satisfaction and student loyalty. The result shows that academic aspects, infrastructure facilities, teachers and teaching and placement services significantly impact student satisfaction. Furthermore, student satisfaction has an impact on student loyalty. On the contrary, the relationship between college administration and student satisfaction was not supported.

The results show academic aspects have the strongest impact on student satisfaction, followed by teachers and teaching, placement services, and infrastructure. Additionally, student satisfaction has a significant impact on student loyalty. The findings revealed that academic aspects critically enhance student satisfaction because it is a core value proposition that student would expect (Kanan & Baker, 2006; Wilkins & Balakrishnan, 2013; Yusoff et al., 2015). Students expect that teaching quality, curriculum, and other related academic services should help them to achieve their graduation with their best performance.

Infrastructure facilities can determine their study life during school. Canteens, clean playgrounds, parking lots and other specific facilities will affect students' experience and satisfaction (Malik et al., 2010). The placement services can be generalized as any activities that can prepare students for their future career, which directly affect their satisfaction. Walsh and Byrne (2013) confirmed that universities provide employment internship or career week for students to explore their interest and skills. Universities should open for feedback which can help them to re-examine existing

courses and develop new courses per students' needs. In this way, students should be trained to better meet the workforce market requirements, so as to improve students' satisfaction. In addition, a good academic atmosphere, the educational technology and teachers and teaching can provide a strong guarantee of student satisfaction.

Teachers and teaching are crucial bodies of educational service. Students' learning ability are subjected to teaching methods, contents and materials (Poon, 2019). Most importantly, students who are satisfied with the university can also reflect their loyalty by spreading their positive word of mouth as a proud student or alumni to their social group and public. However, the relationship between college administrator service and student satisfaction was not statistically support which can be assumed that students have not many chances to interact with academic staff. Thus, they view that it is not critical or should have a major impact on their satisfaction.

6.2 Recommendation

The results show that academic aspects, infrastructure facilities, teachers and teaching, and placement services significantly impact student satisfaction and loyalty. Therefore, university administrators should provide students with rich academic resource and environment to meet students' requirements and expectations. Academic aspects, as a core feature driving student satisfaction, are to be focused. Universities keep up with their competition to stay up in the top rank of the country with their course standard, learning modules and innovative technology in order to ensure existing students' satisfaction and attract the prospect students. At the same time, universities should aim highly to strengthen the infrastructure design of universities, focusing on comfortable life and study environment with more professional facilities and equipment for students.

In terms of placement services, college administrators should constantly improve and strengthen the guidance for employment, and set up more corresponding courses and professional courses according to the market demand. To help students explore their career interest, colleges and universities should build a strong relationship with enterprises in various industries. Most universities signed MOU with many large firms in the country to cultivate talents in terms of training programs, internship and employment opportunities

As universities is a knowledge bank and degree supplier of students, they need to consistently improve teachers, teaching and professional skills by encouraging teachers to involve training inside and outside the school. Teachers are frontliner who can improve students' ability and learning performance by integrating professional knowledge into practice. Even though the relationship between college

administrator service and student satisfaction was not statistically support, educators and future scholars should explore qualitatively for in-depth interpretation.

6.3 Limitation and Further Study

There are some limitations in this research. As for demographic profile, the only sample group in this study is undergraduates in two private universities in Zhejiang, China. The survey scope is relatively small, and there may be deviations in the data collected. Hence, we can expand the scope and investigate university students of different natures in different regions of China in next study. Secondly, according to the conceptual framework, this study verifies five factors that impact student satisfaction and loyalty, but whether there are other influencing factors is not covered in this paper. Finally, this study is only examined quantitative method which should be to further explored in qualitative for better implications of results.

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