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Grade Can Be Classified Effectively with the Measures of Student Satisfaction and Loyalty: A Case of a School in Yunnan, China

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Abstract

Purpose: The objective of this study was to determine the factors influencing the satisfaction and loyalty of students towards the academic grading system at Huayu Featured School (Main Campus) in Zhaotong City, Yunnan Province, China. The main constructs are student support facilities, campus life and social integration, academic experiences, service quality, student satisfaction, and student loyalty. **Research design, data, and methodology:** The target population includes 500 students in grades 7 to 9, with consent from their guardians. This study applied a quantitative method, using a questionnaire as a tool. The sampling techniques are judgmental, stratified random, and convenience sampling. The validity and reliability test were conducted by the item-objective congruence (IOC) index and Cronbach alpha through a pilot test (n=50). The main statistical analyses were made through confirmatory factor analysis (CFA) and structural equation modeling (SEM). **Results:** The results show that students' support facilities, campus life and social integration, academic experiences, and service quality significantly influence student satisfaction. Moreover, student satisfaction significantly influences student loyalty. **Conclusions:** Based on the implications and recommendations, institutions can create a supportive and engaging environment that enhances student satisfaction, fosters loyalty, and contributes to the overall success of students and the institution.

Keywords : Academic Experience, Service Quality, Student Satisfaction, Student Loyalty, Grade Classification

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Classifying students' grades in education in China has become an important direction of education reform. Classifying students' grades in education refers to the education model that sets up education and training at different levels according to student's interests and strengths, career planning and development needs, and other factors to achieve diversified development (Gao, 2013).

In China, the reform process of classifying students' grades in education is also advancing. Since the reform and opening up in 1978, Chinese education has gradually strengthened its international alignment, and the

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advancement of diversified education models has become an important direction of education reform. In recent years, the Chinese government has strengthened its investment in vocational education and technical training, promoting vocational education development (Huang & Yang, 2012).

At the same time, China's classifying of students' grades in education has also had an important impact on talent training and social development. In terms of talent cultivation, classifying students' grades in education helps cultivate talents at different levels and meet the needs of talents in various fields. Regarding social development, the diversified development model brought about by classifying students' grades in education helps promote social progress and stability (Feng, 2017).

The research aims to fill the gap in addressing student satisfaction and loyalty toward grade classification. It can also reflect the advantages and disadvantages of classifying students' grades, discard the negative factors, and strengthen the classifying of students' grades. Therefore, this study aimed to determine the factors influencing the satisfaction and loyalty of students towards the academic grading system at Huayu Featured School (Main Campus) in Zhaotong City, Yunnan Province, China. The main constructs are student support facilities, campus life and social integration, academic experiences, service quality, student satisfaction, and student loyalty.

2. Literature Review

2.1 Student Support Facilities

Martirosyan (2015) defined that Internet technology and library services play a role in the study of student support facilities. The researcher concluded that student orientation, student services, library services, and quality of instruction are all related to student satisfaction, which includes student support facilities. The researcher believes that students' overall view of the quality of school education and service is the biggest factor affecting student satisfaction (Delucchi, 2003). The school's measures of services provided to students have a significant impact on student achievement (Martirosyan, 2015). International and local students are affected differently depending on the service measures provided by the school (Mavondo et al., 2004). Various facilities in a school, including hardware facilities, can affect students' satisfaction with the school (Sohail & Shaikh, 2004). According to the empirical support, the following hypotheses are proposed:

H1: Student support facilities have a significant influence on student satisfaction.

2.2 Campus Life & Social Integration

Campus social life is identified as an important dimension in the study of student satisfaction. Interestingly, social integration is very important. Social integration doctrines positive socialism boycotted student study. Student satisfaction and attention are one of the objectives of quantitative research (Martirosyan, 2015). Many scholars put forward the index of student satisfaction evaluation based on the satisfaction index model combined with the actual situation in China (Martirosyan, 2015; Thomas, 2011; Zhang et al., 2021). Zhang et al. (2021) consider the factors affecting student evaluation and expert opinions. The study points out that academic integration, social integration, and academic achievement are among the dimensions investigated in students' overall satisfaction. At the same time, social integration was one of the most influential factors in satisfaction (Martirosyan, 2015). Based on previous studies, the following hypothesis is proposed:

H2: Campus life and social integration have a significant influence on student satisfaction.

2.3 Academic experience

Academic experience refers to education, including contentment with teaching, career-relevant knowledge and abilities, and support obtained on campus or in courses across disciplines (Letcher & Neves, 2010). When students believe they need more professional instruction, they may grow dissatisfied with their institution. These unproductive academic encounters might result in students having bad attitudes toward their schools, which can lower the likelihood that they will graduate (Styron, 2010). Student satisfaction with education is one of the goals of evaluating the quality of the program and the education provided. Furthermore, the researcher tried to find if there are geographical differences between students' satisfaction levels and the determinants that affect students' satisfaction (Martirosyan, 2015). The findings from the investigation shed light on how teaching contributes to the institution's overarching objectives and how it is re-positioned as a crucial campus function intimately connected to the academic experience (Forrester, 2006). Based on the above discussions, a hypothesis is demonstrated:

H3: Academic experience has a significant influence on student satisfaction.

2.4 Service Quality

Service quality is related to student satisfaction, and the good service quality provided by the school will improve student satisfaction (Ideris et al., 2016). Services quality refer to increasingly important in higher education.

Therefore, examining the importance of service quality in education they are indispensable. There are special needs to complete a quality education. The training provided by the school defines student intake and Settings. Education is the difference between what the student receives and him/her educational responsibility to stakeholders (Subrahmanyam & Raja Shekhar, 2017). In education, the quality of service is becoming increasingly important, and educational institutions such as schools can adapt the quality of school services to their factors (Subrahmanyam & Raja Shekhar, 2017). Quality of service is important for schools to remain competitive and grow. Many schools have recognized the need to improve the quality of services and meet student satisfaction following the school's realities. Therefore, student satisfaction is very important in determining the quality of services provided by the school (Borishade et al., 2021). Hence, the current research focuses on the following hypothesis:

H4: Services quality has a significant influence on student satisfaction.

2.5 Student Satisfaction

Student satisfaction refers to the student's attitude and feeling about their life and education in the school (Weerasinghe & Fernando, 2018). The object meets the realistic requirements of the subject or the practical needs, but the subject is not satisfied with the object because of the subject's expectations. The expected output corresponding to the input in education, the degree of progress compared with history, and the degree of fairness compared with others the same below are greater than the real needs (Li & Wang, 2020). Student satisfaction and loyalty play an important role in school improvement and sustainability, and there is an ineffable relationship between student satisfaction and student loyalty (Feng et al., 2022). The study results in show that student motivation plays a role between satisfaction and loyalty and also prove that student satisfaction directly impacts student loyalty. (Subrahmanyam & Raja Shekhar, 2017). According to Brown and Mazzarol (2009), student pleasure, predicted by how people view the institution, predicts student loyalty. Therefore, this research can put forward the following assumption:

H5: Student satisfaction has a significant influence on student loyalty.

2.6 Student Loyalty

Student loyalty refers to the student through life and accept education in the school, then they have recognition with this school and recommend it to other persons (Dehghan et al., 2014). Schools in education should strengthen education loyalty education and pay attention to the change in ideology (Wanda, 2016). The research objects on loyalty at home and abroad focus on tangible goods in the marketing field, and the research on student loyalty could be more mature (Hennig-Thurau et al., 2001). As customers of education, most scholars and scholars analyze the influencing factors of student loyalty measurement and loyalty, which provides the idea for understanding students' emotional attitude towards the school, consolidating student loyalty, and promoting the sustainable development of the school (Subrahmanyam & Raja Shekhar, 2017).

3. Research Methods and Materials

3.1 Research Framework

Three previous studies are investigated to develop a conceptual framework in Figure 1, including Martirosyan (2015), Subrahmanyam and Raja Shekhar (2017), and Ali et al. (2016). The researcher studied the independent variables: student support facilities, campus life & social integration, academic experience, and service quality; the manipulated variable, students' satisfaction; and the dependent variable, which was students' loyalty. This study established a conceptual framework.

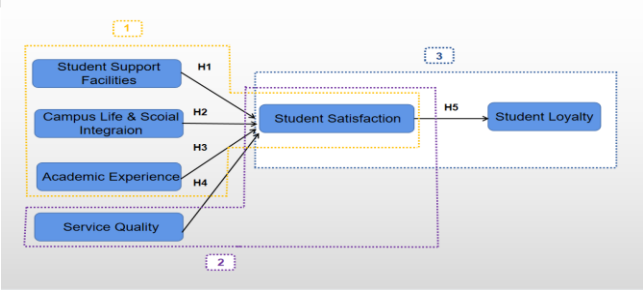

Figure 1: Conceptual Framework

H1: Student support facilities have a significant influence on student satisfaction.

H2: Campus life and social integration have a significant influence on student satisfaction.

H3: Academic experience has a significant influence on student satisfaction.

H4: Services quality has a significant influence on student satisfaction.

H5: Student satisfaction has a significant influence on student loyalty.

3.2 Research Methodology

This study applied a quantitative method, using a questionnaire as a tool. The questionnaire consists of three sections: screening questions, measuring items with a five-

point Likert scale, and demographic information. The validity and reliability test were conducted by the item-objective congruence (IOC) index and Cronbach alpha through a pilot test (n=50). The IOC results reveal that all scale items passed at a score rating from three experts equal to or above 0.6. The examination of a pilot test (n=50) by the Cronbach alpha coefficient reliability test indicated that all items have strong internal consistency equal to or above 0.6 (Hair et al., 2003). The main statistical analyses were made through confirmatory factor analysis (CFA) and structural equation modeling (SEM).

3.3 Population and Sample Size

The target population includes 500 students in grades 7 to 9 at Huayu Featured School (Main Campus) in Zhaotong City, Yunnan Province, China. The sample group is below 18 years old. The researchers request consent from their parents or guardians to involve youths while completing a questionnaire. Soper (n.d.) revealed that a minimum sample size of 403 was needed. The researcher selected 500 as the target population's data size to guarantee enough information to support this investigation.

3.4 Sampling Technique

The sampling techniques are judgmental, stratified random, and convenience sampling. First, the researcher selected 500 students in grades 7 to 9 at Huayu Featured School (Main Campus) in Zhaotong City, Yunnan Province, China. Second, the researcher used stratified random sampling to calculate the ratio of students in each grade, as in Table 1. Third, convenience sampling was applied to distribute the questionnaire by email and chat application to parents or guardians to reach target students.

Table 1: Sample Size

Grade	Population Size	Proportional Size
Grade 7	386	167
Grade 8	387	168
Grade 9	382	165
Total	**1155**	**500**

4. Results and Discussion

4.1 Demographic Information

According to Table 2, the demographic results of 500 respondents show that 212 were males and 288 were females, accounting for 42.4 percent and 57.6 percent, respectively. Most respondents are in a parallel class 38 percent, followed by a top class of 33 percent and an experimental psychological class of 29 percent. The majority group of students is satisfied with their class 64.6 percent.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	212	42.4%
	Female	288	57.6%
Class	Psychological Experimental Class	145	29%
	Top Classes	165	33%
	Parallel Classes	190	38%
Satisfaction with Class	Satisfied	323	64.6%
	Neutral	150	30.0%
	Unsatisfied	27	5.4%

4.2 Confirmatory Factor Analysis (CFA)

The measurement model in Table 3 utilized Confirmatory Factor Analysis (CFA) within a Structural Equation Model (SEM). Initially, the measurement model underwent Confirmatory Factor Analysis (CFA) within a Structural Equation Model (SEM). The results of the CFA confirmed the significance of all items within each variable and demonstrated factor loadings that established discriminant validity. To assess internal consistency, Cronbach's alpha coefficient reliability test indicated that all items exhibited strong consistency, with values equal to or exceeding 0.6 (Hair et al., 2003). For Confirmatory Factor Analysis, item loadings greater than 0.40 with a p-value below 0.05 were considered satisfactory. Furthermore, following the recommendations of Fornell and Larcker (1981), the Average Variance Extracted (AVE) fell above 0.5, and the Composite Reliability (CR) surpassed 0.6, indicated the construct's convergent validity.

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
Student Support Facilities	Martirosyan (2015)	3	0.785	0.648-0.811	0.756	0.511
Campus Life & Social Integration	Martirosyan (2015)	5	0.843	0.624-0.889	0.848	0.531
Academic Experiences	Martirosyan (2015)	4	0.819	0.640-0.862	0.826	0.546
Services Quality	Subrahmanyam and Raja Shekhar (2017)	7	0.883	0.614-0.880	0.884	0.524
Student Satisfaction	Weerasinghe and Fernando (2018)	4	0.802	0.610-0.879	0.808	0.518
Student Loyalty	Dehghan et al. (2014)	3	0.787	0.681-0.886	0.799	0.574

Table 4 was used to assess the fit of the measurement model using statistical software. The model demonstrated acceptable fit without requiring any adjustments, as evidenced by the following goodness of fit measures: CMIN/DF = 3.428, GFI = 0.882, AGFI = 0.855, NFI = 0.839, CFI = 0.880, TLI = 0.862, and RMSEA = 0.070. These measures met the general standards, indicating that the confirmatory factor analysis model established in this study is valid.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	973.619/284 or 3.428
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.882
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.855
NFI	≥ 0.80 (Wu & Wang, 2006)	0.839
CFI	≥ 0.80 (Bentler, 1990)	0.880
TLI	≥ 0.80 (Sharma et al., 2005)	0.862
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.070
Model summary		**Acceptable Model Fit**

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, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation

Following the guidelines set forth by Fornell and Larcker (1981), discriminant validity was evaluated by computing the square root of each Average Variance Extracted (AVE). The results presented in Table 5 indicated that the discriminant validity value exceeded all inter-construct/factor correlations, providing corroborating evidence. With the successful establishment of both convergent and discriminant validity, there is substantial evidence to support the construct validity of the study.

Table 5: Discriminant Validity

	SF	CS	AE	SQ	SS	SL
SF	**0.715**					
CS	0.2	**0.728**				
AE	0.234	0.408	**0.739**			
SQ	0.124	0.342	0.234	**0.724**		
SS	0.252	0.264	0.224	0.258	**0.719**	
SL	0.217	0.304	0.378	0.31	0.184	**0.757**

Note: The diagonally listed value is the AVE square roots of the variables

4.3 Structural Equation Model (SEM)

The structural equation model examines the causal relationship between variables. Table 6 presents the calculated goodness-of-fit indices for the structural model. After adjustments, the statistical results indicated satisfactory fit, as evidenced by the following indices: CMIN/DF = 2.822, GFI = 0.880, AGFI = 0.856, NFI = 0.864, CFI = 0.907, TLI = 0.897, and RMSEA = 0.060. These values demonstrate acceptable fit for the model.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Values	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	1218.080/294 or 4.143	824.033/292 or 2.822
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.849	0.880
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.820	0.856
NFI	≥ 0.80 (Wu & Wang, 2006)	0.799	0.864
CFI	≥ 0.80 (Bentler, 1990)	0.839	0.907
TLI	≥ 0.80 (Sharma et al., 2005)	0.822	0.897
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.079	0.060
Model summary		**Unacceptable Model Fit**	**Acceptable Model Fit**

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, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

This study evaluated the correlation between the independent and dependent variables proposed in the hypotheses by analyzing standardized path coefficients and t-values. Table 7 presents the results of this analysis, where p-values below 0.05 were considered statistically significant. Consequently, all hypotheses were supported based on the findings of the study.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: SF→SS	0.216	3.898***	Supported
H2: CS →SS	0.159	3.104**	Supported
H3: AE →SS	0.135	2.613**	Supported
H4: SQ→SS	0.186	3.706***	Supported
H5: SS→SL	0.2	3.779***	Supported

Note: **P<0.01，***P<0.001

From Table 7, the results are summarized as follows:

According to the path analysis results in the table above, the standardized path coefficient of Student Support Facilities on Student Satisfaction is 0.216 (t value =3.898, p=0.000 <0.001), indicating that Student Support Facilities have a significant positive effect on Student Satisfaction, so H1 is assumed to be established.

The standardized path coefficient of Campus Life & Social Integration on Student Satisfaction is 0.159(t value =3.104, p=0.002 <0.01), indicating that Campus Life & Social Integration has a significant positive effect on Student Satisfaction, so H2 is assumed to be established.

The standardized path coefficient of Academic Experiences is 0.135(t value =2.613, p=0.009 <0.01), indicating that Academic Experience has a significant positive effect on Student Satisfaction, so H3 is assumed to be established.

The standardized path coefficient of Services Quality is 0.186(t value =3.706, p=0.000 <0.001), indicating that Service Quality has a significant positive effect on Student Satisfaction, so H4 is assumed to be established.

The standardized path coefficient of Student Satisfaction is 0.186(t value =3.706, p=0.000 <0.001), indicating that Student Satisfaction has a significant positive effect on Student Loyalty, so H5 is assumed to be established.

5. Conclusion, Recommendation & Limitation

5.1 Conclusion and Discussion

This research has been met to determine the factors influencing the satisfaction and loyalty of students towards the academic grading system at Huayu Featured School (Main Campus) in Zhaotong City, Yunnan Province, China. Overall, student support facilities, campus life and social integration, academic experiences, and service quality significantly contribute to student satisfaction. By understanding and addressing these factors, educational institutions can create an environment that fosters student satisfaction, increases student loyalty, and has positive outcomes for both the students and the institution.

The availability and quality of student support facilities play a crucial role in enhancing student satisfaction. Institutions that prioritize and provide comprehensive support services such as counseling, career guidance, health services, and extracurricular activities create a conducive environment for students to thrive (Delucchi, 2003; Martirosyan, 2015; Mavondo et al., 2004).

Zhang et al. (2021) agreed that the social aspect of campus life and the opportunities for social integration significantly impact student satisfaction. A vibrant and inclusive campus community that offers a range of clubs, organizations, cultural events, and student-led activities fosters a sense of belonging and camaraderie among students (Martirosyan, 2015; Thomas, 2011; Zhang et al., 2021).

The quality of academic experiences, including the effectiveness of teaching, availability of resources, and opportunities for research and practical learning, greatly influence student satisfaction (Styron, 2010). When students receive a high-quality education, have access to knowledgeable and supportive faculty members, and are provided with modern learning facilities, it positively impacts their satisfaction with their academic journey. Additionally, academic challenges that foster personal and intellectual growth contribute to students' sense of accomplishment and fulfillment (Letcher & Neves, 2010).

The institution's service quality, including administrative efficiency, responsiveness to student needs, and effective communication, significantly influence student satisfaction. Efficient handling of administrative processes, timely and accurate information dissemination, and a responsive support system contribute to student satisfaction (Subrahmanyam & Raja Shekhar, 2017).

Student satisfaction plays a vital role in determining student loyalty. Satisfied students are more likely to perceive their institution positively and are more inclined to remain enrolled, complete their program, and recommend the institution to others (Feng et al., 2022). Additionally, satisfied students are more likely to become engaged alums and contribute to the reputation and success of the institution (Weerasinghe & Fernando, 2018).

5.2 Recommendation

Based on the findings, recommendations are provided. Institutions should continually assess and improve their student support facilities. This can include expanding counseling services, career development programs, health and wellness initiatives, and extracurricular activities. Regular feedback from students can help identify areas for improvement and ensure that the support services meet their needs effectively.

Educational institutions should actively promote a vibrant campus community by organizing various cultural events, facilitating student clubs and organizations, and creating spaces for social interaction. Encouraging student-led initiatives and fostering an inclusive environment will enhance social integration, promote networking opportunities, and strengthen students' sense of belonging.

Institutions should prioritize the quality of teaching and provide faculty members with professional development opportunities to enhance their instructional skills. Investing in modern learning resources and facilities, promoting research opportunities, and offering practical learning experiences will enrich students' academic experiences and contribute to their overall satisfaction.

Educators should improve administrative efficiency, streamline processes, and provide effective communication channels. Timely and accurate information dissemination, responsive customer service, and efficient handling of student inquiries and concerns will contribute to higher

levels of student satisfaction.

To measure and monitor student satisfaction, instructors should regularly assess student satisfaction through surveys, focus groups, or other feedback mechanisms. This data can help identify areas of improvement and guide decision-making processes to enhance the overall student experience.

Academic practitioners should foster a culture of continuous improvement by actively seeking feedback, involving students in decision-making processes, and implementing changes based on their input. This collaborative approach can lead to an environment that prioritizes student satisfaction and ensures that the institution evolves to meet the changing needs of its students.

5.3 Limitation and Further Study

There are limitations to further development in the future study. First, the generalizability of findings may be limited if the study has a small or homogeneous sample size. Future studies should include larger and more diverse samples to enhance the external validity of the results. Next, the measurement tools used to assess variables such as student satisfaction and loyalty may need to be improved. Future studies could refine and validate measurement instruments to ensure reliability and validity across educational contexts. Last, exploring mediating and moderating variables can provide a more nuanced understanding of the relationship between the variables under investigation. Future studies could investigate additional factors that may mediate or moderate the impact of student support facilities, campus life, academic experiences, service quality, and student satisfaction on student loyalty.

References

Ali, F., Zhou, Y., Hussain, K., Nair, P. K., & Ragavan, N. A. (2016). Does higher education service quality effect student satisfaction, image and loyalty? A study of international students in Malaysian public universities. *Quality assurance in education, 24*(1), 70-94. https://doi.org/10.1108/QAE-02-2014-0008

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238. https://doi.org/10.1037/0033-2909.107.2.238

Borishade, T. T., Ogunnaike, O. O., Salau, O., Motilewa, B. D., & Dirisu, J. I. (2021). Assessing the relationship among service quality, student satisfaction and loyalty: the NIGERIAN higher education experience. *Heliyon, 7*(7), e07590. https://doi.org/10.1016/j.heliyon.2021.e07590

Brown, R. M., & Mazzarol, T. W. (2009). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher education, 58*, 81-95.

Dehghan, A., Dugger, J., Dobrzykowski, D., & Balazs, A. (2014). The antecedents of student loyalty in online programs. *International Journal of Educational Management, 28*(1), 15-35.

Delucchi, M. (2003). *Student satisfaction with higher education during the 1970s-a decade of social change* (1st ed.). The Edwin Mellenpress.

Feng, D., Xiang, C., Vongurai, R., & Pibulcharoensit, S. (2022). Investigation on Satisfaction and Performance of Online Education Among Fine Arts Major Undergraduates in Chengdu Public Universities. *AU-GSB E-JOURNAL, 15*(2), 169-177. https://doi.org/10.14456/augsbejr.2022.82

Feng, L. (2017). Excesses and deficiencies of Chinese higher education from the perspective of hierarchical changes. J*ournal of Beijing University of Social Science Edition, 6*(27) 109-115.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50. https://doi.org/10.2307/3151312

Forrester, S. (2006). An examination of the factors contributing to student satisfaction with their overall academic experience. *Schole: A journal of leisure studies and recreation education, 21*(1), 21-33.

Gao, G. (2013). Analysis of the mechanism of reproduction of the educational class in China. *Journal of Young Literati, 1*(1), 73-75.

Hair, J. F., Babin, A., Money, A., & Samouel, P. (2003). *Essentials of Business Research Methods.* Lehigh Publishing.

Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and managing student loyalty: An approach based on the concept of relationship quality. *Journal of service research, 3*(4), 331-344. https://doi.org/10.1177/109467050134006

Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and social psychology review*, *14*(3), 332-346. https://doi.org/10.1177/1088868310361240

Huang, X., & Yang, J. (2012). The decomposition and governance of educational inequality between regions in China. *Journal of Beijing University of Technology (Social Science Edition)*, *4*(2) 156-162.

Ideris, M. S. K., Lim, T. Y., Mohd Rodzi, S., Romle, A. R., Mohamad Zabri, M. A. H., & Mahamad, N. A. (2016). Students' satisfaction on facilities in Universiti Utara Malaysia. *World Applied Sciences Journal, 34*(6), 795-800.

Letcher, D. W., & Neves, J. S. (2010). Determinants of undergraduate business student satisfaction. *Research in Higher Education Journal, 6,* 1-26.

Li, C., & Wang, Y. (2020). Survey and Analysis on the Students' Satisfaction with Undergraduate Teaching Management in Local Agricultural Colleges and Universities: A Case Study of Tianjin Agricultural University. *Asian Agricultural Research*, *8,* 69-82.

Martirosyan, N. (2015). An examination of factors contributing to student satisfaction in Armenian higher education. *International Journal of Educational Management, 29*(2), 177-191. https://doi.org/10.1108/IJEM-09-2013-0143

Mavondo, F. T., Tsarenko, Y., & Gabbott, M. (2004). International and local student satisfaction: Resources and capabilities perspective. *Journal of marketing for higher education, 14*(1), 41-60. https://doi.org/10.1300/J050v14n01_03

Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, *58*(7), 935-943. https://doi.org/10.1016/j.jbusres.2003.10.007

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M. A. Lange (Ed.), *Leading-edge psychological tests and testing research* (pp. 27-50). Nova Science Publishers.

Sohail, M. S., & Shaikh, N. M. (2004). Quest for excellence in business education: a study of student impressions of service quality. *International Journal of Educational Management*, *18*(1), 58-65.

Soper, D. S. (n.d.). *A-priori Sample Size Calculator for Structural Equation Models* [Software]. www.danielsoper.com/statcalc/default.aspx

Styron, J. R. (2010). Student satisfaction and persistence: Factors vital to student retention. *Research in Higher Education Journal*, *6,* 1-10.

Subrahmanyam, A., & Raja Shekhar, B. (2017). Where do you find loyalty in the contemporary university scene?. *Journal of Applied Research in Higher Education, 9*(3), 378-393. https://doi.org/10.1108/JARHE-01-2016-0004

Thomas, S. (2011). What drives student loyalty in universities: An empirical model from India. *International Business Research, 4*(2), 183-192.

Wanda, W. (2016). *Local university study on the relationship between the image and student satisfaction and loyalty* [Unpublished Master's Thesis]. Qilu Industrial University.

Weerasinghe, I. M. S., & Fernando, R. L. S. (2018). Critical factors affecting students' satisfaction with higher education in Sri Lanka. *Quality Assurance in Education, 26*(1), 115-130. https://doi.org/10.1108/QAE-04-2017-0014

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological methodology, 8*, 84-136. https://doi.org/10.2307/270754

Wu, J. H., & Wang, Y. M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information & management, 43*(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002

Zhang, G., Cai, J., & Sun, Y. (2021). A Study on the Factors Influencing the Satisfaction of College Users on Logistics Services under the Structural Equation Model: Example of Jingdong Logistics in China. E3S Web of Conferences, 235, 1-4.