วารสารวิชาการมหาวิทยาลัยราชภัฏภูเก็ต ปีที่ 22 ฉบับที่ 1 (2569) มกราคม - มิถุนายน : e279038
Phuket Rajabhat University Academic Journal Volume 22 No. 1 (2026) January–June ISSN 3056-9303 (Online)

Assessing Student Satisfaction with University Services Using the 4Cs Model: A Case Study at Asia-Pacific International University

Deguang Yang[1] and Damrong Sattayawaksakul[2*]

Received: 21-02-2025, Revised: 15-05-2025, 10-10-2025, Accepted: 17-10-2025

Abstract

This study examined student satisfaction with university services at Asia-Pacific International University (AIU) using the 4Cs model-Customer Needs, Cost, Convenience, and Communication. A quantitative survey was conducted with a representative sample of 132 international undergraduate students to assess how these four factors correlate with overall student satisfaction. Data were collected through questionnaires and analyzed using frequency, percentage, mean, standard deviation, correlation coefficients, simple regression, and multiple regression analysis. The findings revealed that AIU students generally expressed high satisfaction, with three 4Cs dimensions (customer needs, cost, and communication) showing statistically significant positive correlations with student satisfaction. However, the analysis indicated that convenience, while positively correlated, did not show a significant impact on overall satisfaction. Suggestions about additional variables and other methodologies were provided for future research studies on student satisfaction, especially qualitative studies could provide deeper insights into the underlying reasons for student satisfaction and offer a more comprehensive understanding of the factors that shape it.

Keyword: Student Satisfaction; University Services; 4Cs Model

[1] Faculty of Business Administration, Asia-Pacific International University

[2] Faculty of Business Administration, Asia-Pacific International University

*Corresponding author, E-mail: damsat@apiu.edu

Introduction

Asia-Pacific International University (AIU) is a private Christian institution located in Muaklek, Saraburi, Thailand. As part of the global Seventh-day Adventist education system, AIU is committed to providing whole-person education, focusing not only on the academic development of students but also on the cultivation of moral character rooted in Christian values. Its unique religious background makes Christian families the primary target for student enrollment. However, as an international university, AIU's student body includes individuals from Thailand, Southeast Asia, and various countries across Asia, North and South America, and Africa. This cultural diversity, combined with a unified religious foundation, makes AIU's enrollment prospects optimistic, as many Christian families are eager to send their children to a church-affiliated university (Holmes, 2023).

Student satisfaction is a key indicator of a university's ability to provide a fulfilling educational experience. (Chacko et al., 2024), student satisfaction not only improves student retention but also helps institutions evaluate the effectiveness of their strategies, enabling them to make adjustments that foster stronger connections between the school and its students (Yu-zh, 2006). Despite this potential, AIU's enrollment data suggests that offering religious education alone does not fully meet the expectations of students and their families (Hutabarat et al., 2020). In addition, the expectations and satisfaction levels of different backgrounds of students in the international university would be different. Although the school's enrollment has been increasing since the pandemic, there is still significant room for improvement (Golden & Satayavaksakul, 2021).

Assessing student satisfaction is important for higher education institutions because it provides critical insights that can lead to improved educational quality, student retention, and institutional success. Student satisfaction assessments are a widely studied topic in educational research, especially in the context of higher education (Khairusy & Febriani, 2023). The literature typically explores how satisfied students are with different aspects of their educational experience and what factors influence that satisfaction (Wong & Chapman, 2022). However, these prior studies employed a classical approach, and there is limited literature on the new antecedents for student satisfaction. This research applies the 4Cs model (Customer Needs, Cost, Convenience, and Communication), originally designed as a marketing tool to emphasize customer-centric values (Lin et al., 2013), to assess AIU's services. The model

is used to evaluate whether the university is successfully addressing students' academic and non-academic needs, offering affordable and accessible options, and maintaining effective communication.

Research Objective

This study aims to examine the relationship between the 4Cs model (Customer Needs, Cost, Convenience, and Communication) and student satisfaction with university services at Asia-Pacific International University (AIU).

Literature Review

This research applies the 4Cs model, which includes Customer Needs, Cost, Convenience, and Communication, to assess AIU's services and student satisfaction. Thus, this review of related literature focuses on the 4Cs model.

The 4Cs Model

The 4Cs model is a customer-centric framework alternative to the traditional 4Ps of marketing mix (Product, Price, Place, Promotion). Robert F. Lauterborn introduced it in 1990 in an effort to better represent the demands and habits of contemporary consumers. Alternatively, it is called the 4Cs Marketing Mix, which consists of Customer, Cost, Convenience, and Communication. (According to Lin et al., 2013) and (Wasmer et al., 1997), the 4Cs model shifts focus from the company's needs (like the traditional 4Ps) to the customer's perspective, guiding businesses to build strategies that understand and fulfill customer needs, offer real value, ensure easy access and use, and foster two-way dialogue, ultimately improving customer engagement and competitive advantage.

Customer Needs

Viewing students as primary "customers" of university services emphasizes the importance of meeting their unique expectations (Farahmandian et al., 2013). According to the University Student Satisfaction Scale (U-SSS), student satisfaction is influenced by a range of factors, including social and cultural facilities, academic offerings, and the perceived value of the institution itself (Özok et al., 2022). Notably, universities that excel in delivering quality academic services-such as relevant and engaging programs and supportive departmental resources-tend to achieve higher satisfaction rates among students (Rifai et al., 2022;

Farahmandian et al., 2013). The academic experience, specifically, has been shown to be central to student satisfaction and retention, underscoring the need for institutions to prioritize educational quality and support systems (Carter & Yeo, 2016). Furthermore, research suggests that satisfaction with non-academic services, such as career guidance and counseling, also significantly influences students' overall perception of university value (Mills et al., 2000). Based on the literature review, the first research hypothesis could be written below:

H1: Meeting academic and non-academic needs positively influences student satisfaction among AIU students.

Cost

Financial factors are a critical aspect of student satisfaction, as education costs often directly influence students' perception of value. Studies reveal that students are more likely to be satisfied when they perceive the cost of their education as being matched by high-quality services and experiences (Farahmandian et al., 2013). This perceived value of education, assessed against tuition and other fees, plays a significant role in satisfaction ratings (Raza et al., 2021). The availability of financial support, including scholarships and grants, further mitigates financial burdens, positively impacting student contentment (Boakye & Boakye, 2020). Thus, universities that manage to balance cost with perceived quality often enjoy higher satisfaction and retention rates among students. Therefore, the following hypothesis is made:

H2: The affordability of university services and education-related costs positively influences student satisfaction among AIU students.

Convenience

Accessibility and convenience of university resources, such as academic advising, libraries, and other facilities, are also significant contributors to student satisfaction. Universities that provide easy access to essential services tend to report higher satisfaction scores, as convenience directly influences the quality of student life on campus (Ningsih et al., 2020; Farahmandian et al., 2013). Enhanced accessibility through initiatives like flexible learning schedules and online course offerings addresses diverse student needs and allows for greater academic flexibility, which research has linked to increased satisfaction (Raza et al., 2021). As institutions evolve, convenience has become an increasingly vital element of a positive educational experience (Farrhan, 2018). Based on the literature review, the third research hypothesis could be written below:

H3: The convenience and accessibility of university services positively influence student satisfaction among AIU students.

Communication

Effective communication between students and university staff forms the backbone of a supportive academic environment. Clear, open communication channels not only enhance satisfaction but also enable students to provide feedback, allowing institutions to address emerging needs and concerns (Yuan, 2023). A robust feedback mechanism ensures that student voices are heard, fostering a sense of belonging and engagement that is essential for student success (Boakye & Boakye, 2020). Regular updates about academic and extracurricular opportunities further contribute to a well-informed and satisfied student body, reinforcing their commitment to the institution (Mills et al., 2000). Thus, the last hypothesis is made:

H4: The effectiveness of communication between the university and students positively influences student satisfaction among AIU students.

Research Framework

This research examined the student satisfaction level by using the 4Cs model among international undergraduate students at Asia-Pacific International University. There were two main variables: (1) the Independent variable: the 4Cs model that involved customer needs, cost, convenience, and communication; (2) the Dependent variable: Student Satisfaction at Asia-Pacific International University. Based on the literature and the proposed hypotheses, the research framework was developed as presented in Figure 1

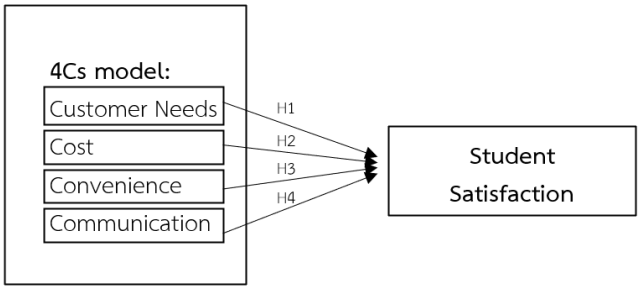


Figure 1 Research Framework

Source: Developed by authors

Methodology

Population

The target population for this study consisted of international undergraduate students enrolled at Asia-Pacific International University (AIU) in Muak Lek, Saraburi, Thailand. As of October 2024, there were 498 international students registered at AIU, comprising 227 female students and 271 male students.

Sample

The sample size for conducting the correlation analysis is based on Taro Yamane's (1973) formula. To get the sample size from the total number of students at the Asia-Pacific International University, a confidence level of 95% and 5% sampling error was considered.

Formula $n = N/(1 + Ne^2)$

Where, n = sample size

N = a population size (498)

e = the level of precision

$n = 498/((1) + 498(0.05)^2)$

n = 222

Therefore, the sample size was 222 for this study.

Sampling Technique

The sample for this study was selected using simple random sampling, ensuring a balanced representation of both male and female students, as well as students from various academic years (Freshman, Sophomore, Junior, Senior). This approach was designed to capture a diverse range of student experiences and perspectives, providing a comprehensive view of student satisfaction across different demographics.

Data Collection

The data were collected from the international undergraduate students at Asia-Pacific International University through the online survey using Google Forms, from November 13-19, 2024. Google Form links were sent to the students who stayed in the library, classes, and dorms randomly. The total number of samples after the online survey link was distributed and collected was 132, which is about a 59.46% response rate.

Research Instrument Development

To assess student satisfaction at Asia-Pacific International University (AIU), a structured questionnaire was developed, comprising items across multiple sections that aligned with the 4Cs Model. The questionnaire was divided into two main parts. Part I gathered demographic data, where respondents were asked to indicate their gender (Male/Female) and academic level (Freshman, Sophomore, Junior, Senior). Part II contained five sections with statements related to various aspects of the student experience at AIU, involving Customer needs, Costs, Convenience, Communication, and Overall satisfaction. Each statement in Sections 1 to 5 was rated on a 5-point Likert scale, where 1 represented "Strongly Disagree," 2 represented "Disagree," 3 represented "Neutral," 4 represented "Agree," and 5 represented "Strongly Agree." These measurement items were written by the researchers based on the literature review of these variables. This scale enabled participants to express the degree of their satisfaction or agreement with each statement, providing a quantitative measure of AIU's performance across the targeted dimensions. After collecting 132 sets of data, the researchers calculated the Reliability value of the entire questionnaire. None of the items and the constructs received less than 0.80 Cronbach's alpha coefficient value.

Data Analysis

The data was analyzed by a computer statistical calculating software program. The researchers divided the content of the analysis by using the following statistics:

Descriptive Statistic

This was used to describe the information of the respondents and the variables. It is presented in the form of a table showing frequency, percentage, mean, and standard deviation.

Cut-off points were used to determine the range of each response category. The cut-off points for each range were calculated using the Class Interval Formula:

Class Interval= (Highest Value-Lowest Value)/(Number of Classes)

The highest value was 5, the lowest value was 1, and the number of classes was 5; therefore, the class interval was 0.80. The cut-off points and their interpretation were as follows:

An average score of 4.21 – 5.00 implies a Very High Satisfaction Level

An average score of 3.41 – 4.20 implies a High Satisfaction Level

An average score of 2.61 – 3.40 implies an Average Satisfaction Level

An average score of 1.81 – 2.60 implies a Low Satisfaction Level

An average score of 1.00 – 1.80 implies a Very Low Satisfaction Level

Analytical statistic

A test of the correlation between 4Cs (Customer needs, Cost, Communication, Convenience) and student satisfaction was performed using Pearson's Correlation. The analysis of the ability to explain student satisfaction under the 4Cs model (Customer needs, Cost, Communication, Convenience) was assessed using simple regression and multiple regression analyses.

Research Results

Demographic Information

As shown in Table 1, among the total 132 respondents, 46.21% were males, and 53.79% were females. The Senior students represented the largest part (33.33%) of the whole sample; the Freshman, Sophomore, and Junior students' samples were around 22.00% each.

Table 1 Respondents' Demographic Information (n = 132)

Demographic Feature	Frequency	Percentage
Gender		
Male	61	46.21
Female	71	53.79
Academic Level		
Freshman	29	21.97
Sophomore	30	22.73
Junior	29	21.97
Senior	44	33.33

Source: Developed by authors

Level of 4Cs and Student Satisfaction

The results of the analysis, as shown in Table 2, revealed the mean level and standard deviation of the 4Cs and student satisfaction.

Table 2 Mean and Standard Deviation Score (n = 132)

Variable	Mean	SD	Level
Customer Needs	3.66	0.83	High
Cost	3.17	0.79	Average
Convenience	3.64	0.78	High
Communication	3.56	0.87	High
Student Satisfaction	3.60	0.89	High

Source: Developed by author

The perceptions of Asia-Pacific International University's students toward the university services based on the 4Cs model were at a high level overall ($\bar{X}$ more than 3.41). When considering each component of the 4Cs model, it was found that Customer Needs had the highest level ($\bar{X}$= 3.66, SD = 0.83), followed by Convenience ($\bar{X}$= 3.64, SD = 0.78) and Communication ($\bar{X}$= 3.56, SD = 0.87). Meanwhile, Cost was rated at an average level ($\bar{X}$=3.17, SD = 0.79) compared to the other dimensions. The perception of Asia-Pacific International University's students toward overall student satisfaction was slightly lower ($\bar{X}$= 3.60, SD = 0.89) than the highest-rated dimensions of the 4Cs model, such as Customer Needs ($\bar{X}$= 3.66, SD = 0.83) and Convenience ($\bar{X}$= 3.64, SD = 0.78).

Correlation Between 4Cs and Student Satisfaction

The results of the analysis, as shown in Table 3, revealed the relationships between the 4Cs dimensions and student satisfaction through Pearson's correlation coefficients.

Table 3 Pearson's Correlation Test Among Variables (n = 132)

Variables	Student Satisfaction	Customer Needs	Cost	Convenience	Communication
Student Satisfaction	1.000				
Customer Needs	.598**	1.000			
Cost	.605**	.631**	1.000		
Convenience	.597**	.664**	.684**	1.000	
Communication	.643**	.514**	.589**	.768**	1.000

Note: ** p < .01; Source: Developed by authors

When examining the interrelationships among the 4Cs components, the analysis indicated that all dimensions of the 4Cs model were highly intercorrelated ($r > 0.50$, $p < 0.01$). Among these, Communication and Convenience exhibited a very high correlation ($r = 0.768$, $p < 0.01$), suggesting a particularly strong connection between these two dimensions. Other high correlations were observed between Cost and Convenience ($r = 0.684$, $p < 0.01$), Customer Needs and Convenience ($r = 0.664$, $p < 0.01$), and Customer Needs and Cost ($r = 0.631$, $p < 0.01$). These findings highlighted the strong interdependence among the 4Cs dimensions.

Relationship Between 4Cs and Student Satisfaction

As shown in Table 4, the multiple regression analysis revealed a strong relationship between the 4Cs and student satisfaction, with an R-value of 0.731, indicating a significant positive correlation. The R^2 value of 0.535 suggested that approximately 53.5% of the variation in student satisfaction can be explained by the 4Cs model, demonstrating a moderately high level of explanatory power.

Table 4 Multiple Regression Table for Student Satisfaction (N = 132)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	.426	.278		1.532	.128
Customer Needs	.307	.092	.286	3.340	.001
Cost	.253	.099	.225	2.544	.012
Convenience	-.072	.128	-.064	-.565	.573
Communication	.423	.098	.413	4.318	.000

Note: R = 0.731, R Square = 0.535; Source: Developed by authors

Upon examining the predictor regression coefficients, three variables were found to significantly impact student satisfaction. These predictors were Communication (Beta = 0.423, $p < 0.01$), Customer Needs (Beta = 0.307, $p < 0.01$), and Cost (Beta = 0.253, $p < 0.05$). These results indicated that effective communication, addressing customer needs, and managing costs played key roles in determining student satisfaction. In contrast, Convenience was found not statistically significant ($p > 0.05$). This suggested that, in the context of this study,

the convenience of accessing services and campus facilities did not have a meaningful impact on student satisfaction at AIU. Table 5 shows the summary of the findings of the hypothesis testing.

Table 5 Summary of Hypothesis Testing Results

Hypothesis	Result
H1:Meeting academic and non-academic needs positively influences student satisfaction among AIU students.	Accept
H2: The affordability of university services and education-related costs positively influences student satisfaction among AIU students.	Accept
H3: The convenience and accessibility of university services positively influence student satisfaction among AIU students.	Reject
H4: The effectiveness of communication between the university and students positively influences student satisfaction among AIU students.	Accept

Conclusion and Discussion

This study analyzed student perceptions of university services at Asia-Pacific International University (AIU) through the 4Cs model: Customer Needs, Cost, Convenience, and Communication. The findings revealed that AIU students generally held positive perceptions, with an overall satisfaction score of $\overline{X}$ = 3.60 (SD = 0.89). All dimensions of the 4Cs model showed statistically significant positive correlations with student satisfaction at the $p < 0.01$ level ($R > 0.50$, $p < 0.01$). Furthermore, the multiple regression analysis indicated a strong relationship between the 4Cs and student satisfaction, with an R value of 0.731, demonstrating a high positive correlation. The R^2 value of 0.535 showed that the 4Cs collectively explained 53.5% of the variance in student satisfaction ($R^2 = 0.535$), reflecting a moderately high explanatory power.

The analysis supported prior research highlighting the importance of addressing students' academic and non-academic needs in enhancing satisfaction ($r = 0.598$, $p < 0.01$). As (Farahmandian et al., 2013) and (Rifai et al., 2022) suggested, meeting customer needs-such as providing relevant and engaging academic programs-was crucial for improving student satisfaction and retention. Furthermore, (Özok et al., 2022) emphasized that social and cultural facilities also significantly influence student satisfaction. The findings indicated that Asia-Pacific International University had performed well in meeting students' academic and non-academic

needs ($\bar{X}$= 3.66, SD = 0.83), reflecting a positive outcome and an opportunity for the university to continue excelling in these areas.

Financial factors, as highlighted in the literature, played a crucial role in shaping student satisfaction. (Farahmandian et al., 2013) and (Raza et al., 2021) emphasized the importance of aligning the perceived value of education with its costs. This finding aligned with the study's results, which showed that Cost had a significant positive correlation with satisfaction ($r = 0.605$, $p < 0.01$), highlighting the impact of affordability on students' overall perceptions. However, the average score for Cost was the lowest among the four factors ($\bar{X}$= 3.17, SD = 0.79). Further analysis of the Cost-related items on the questionnaire revealed that the perception of the "quality and variety of food provided in the cafeteria for the price" received the lowest rating ($\bar{X}$= 2.34), in contrast to "Tuition Fee" ($\bar{X}$= 3.51), "Dormitory Fee" ($\bar{X}$= 3.46), and "Total cost of education at AIU" ($\bar{X}$= 3.38). These results suggested that AIU could improve students' perceptions of cost by either lowering the price or enhancing the quality of cafeteria food to better align the perceived value with the cost, improving overall satisfaction with the cost at Asia-Pacific International University.

Convenience was rated highly ($\bar{X}$= 3.64, SD = 0.78) and showed a positive correlation with satisfaction ($r = 0.597$, $p < .01$). However, the multiple regression analysis indicated that convenience had no statistically significant impact on overall satisfaction (Beta = -0.072, $p > .05$). This result contrasted with prior studies, such as those by (Ningsih et al., 2020) and (Raza et al., 2021), which highlighted the critical role of accessibility and convenience in enhancing student satisfaction. The analysis suggested that while convenience was valued, it was not a primary driver of satisfaction for AIU students in this context. The results differed from prior research, indicating the need for further investigation into this dimension. Future studies should consider using an alternative questionnaire or methodology to explore this relationship more comprehensively and test whether convenience plays a more significant role in other student populations or contexts.

The multiple regression analysis revealed that effective communication, long recognized in the literature as a key element of a supportive academic environment, was the most influential predictor of student satisfaction (Beta = 0.423, $p < .01$). Clear and responsive communication enhanced student engagement and addressed emerging needs, as emphasized in the "Research on the Construction of Evaluation Index System for Satisfaction of College

Students with University Services" (Yuan, 2023). Consistent updates on academic and extracurricular opportunities, as noted by (Mills et al., 2000), contributed to the strong correlation between communication and satisfaction ($r = 0.643$, $p < .01$). The descriptive analysis also showed that communication ($\overline{X} = 3.56$, $SD = 0.87$) was rated highly, indicating that Asia-Pacific International University was performing well in this area and should continue to prioritize it.

In conclusion, this study reinforced the findings of previous research by emphasizing the importance of academic quality, cost management, and effective communication in shaping student satisfaction. While AIU had excelled in meeting student needs and maintaining effective communication, addressing affordability concerns-particularly regarding cafeteria services-would enhance the perceived value of its offerings. Further research was recommended to explore the role of convenience in student satisfaction, particularly to assess whether convenience had a meaningful relationship with satisfaction in different contexts or at other institutions.

Research Limitations and Future Study

This research was conducted at Asia-Pacific International University (AIU), Thailand, a private, international Christian institution. The context of AIU might differ from that of other universities, particularly due to its Christian educational framework, which influenced academic programs, cost structures, and communication styles. Moreover, the questionnaire used in this study was developed by the researchers based on the literature review, and future research could benefit from using alternative questionnaires and employing different methods for sample selection.

Additionally, this study utilized the 4Cs model to measure student satisfaction, but it focused on a limited set of variables. Future research was encouraged to consider a broader range of variables that may influence student satisfaction. Qualitative studies could provide deeper insights into the underlying reasons for student satisfaction and offer a more comprehensive understanding of the factors that shape it.

References

Boakye, D. O., & Boakye, I. (2020). Perception of students as customers as a moderator in the relationship between customer orientation culture and student satisfaction in selected universities in Ghana. *The International Journal of Business & Management, 8*(4), 487–499. https://doi.org/10.24940/theijbm/2020/v8/i4/BM2004-082

Carter, S., & Yeo, A. C.-M. (2016). Students-as-customers' satisfaction, predictive retention with marketing implications: The case of Malaysian higher education business students. *International Journal of Educational Management, 30*(5), 635–652. https://doi.org/10.1108/IJEM-09-2014-0129

Chacko, J., Collignon, S. E., Green, C. L., & Peace, A. G. (2024). Understanding the impact of perceptions of student assessment congruence, satisfaction, and peer behavior on cheating incentive in higher education. *Journal of Information Systems Education, 35*(4), 481–494. https://doi.org/10.62273/CSGL6637

Farahmandian, S., Minavand, H., & Afshardost, M. (2013). Perceived service quality and student satisfaction in higher education. *IOSR Journal of Business and Management, 12*(4), 65–74. https://doi.org/10.9790/487X-1246574

Farrhan, B. Y. (2018). Managing academic institutions by enhancing student experience. *International Journal of Economics and Business Research, 16*(3), 382–394. https://doi.org/10.1504/IJEBR.2018.094391

Golden, H., & Satayavaksakul, D. (2021). The relationship between perceived distinctive competencies and student satisfaction in private higher education institution: The case of Asia-Pacific International University (AIU). *St. Theresa Journal of Humanities and Social Sciences, 7*(2), 144–164.

Holmes, S. E. (2023). A qualitative inquiry into Christian faith transmission in the family context. *Practical Theology, 16*(5), 604–617. https://doi.org/10.1080/1756073X.2023.2184152

Hutabarat, R., Hutabarat, F., & Hutabarat, F. (2020). Factor analysis of students' satisfaction with academic courses. *Human Behavior, Development and Society, 21*(1), 78–84.

Khairusy, M. A., & Febriani, R. (2023). University student satisfaction: A systematic literature review. *Jurnal Bisnis, 14*(1), 267–272. https://doi.org/10.18196/jbti.v14i1.17035

Lin, T. T., Lee, C., & Lin, H. (2013). Analysis of customer profit contribution for banks with the concept of marketing mix strategy between 4Cs and 5Ps. *Service Business, 7*(1), 37–59. https://doi.org/10.1007/s11628-012-0144-z

Mills, J., Graham, K., Jeha, M., Kim, Y. S., & Clay, J. M. (2000). Show me your service: The paradigm of student customer satisfaction revisited. *Journal of Hospitality & Tourism Education, 12*(2), 24–31. https://doi.org/10.1080/10963758.2000.10685276

Ningsih, N. L. A., Widari, D., & Artawan, I. (2020). Analisa kepuasan mahasiswa terhadap kualitas pelayanan pendidikan. *Wacana Ekonomi Jurnal Ekonomi, Bisnis Dan Akuntansi 19*(1), 24–29. https://doi.org/10.22225/we.19.1.1403.24-29

Özok, H. İ., Kayri, M., & Tanhan, F. (2022). University student satisfaction scale: Validity and reliability study. *Yuzunci Yil Universitesi Egitim Fakultesi Dergisi, 19*(2), 446–461. https://doi.org/10.33711/yyuefd.1108292

Raza, S. A., Qazi, W., Khan, K. A., & Shah, S. M. M. (2021). Student as customer concept: An approach to determine Pakistani students' preferences as customers while studying at private universities. *International Journal of Educational Management, 35*(2), 513–531. https://doi.org/10.1108/IJEM-04-2019-0138

Rifai, M., Kencana, I. P. E. N., & Nilakusmawati, D. P. E. (2022). Apakah mutu layanan akademik memengaruhi kepuasan mahasiswa fmipa unud belajar di masa pandemi. *E-Jurnal Matematika, 11*(2), 140–145. https://doi.org/10.24843/MTK.2022.v11.i02.p373

Wasmer, D. J., Williams, J. R., & Stevenson, J. (1997). A reconceptualization of the marketing mix: Using the 4 C's to improve marketing planning in higher education. *Journal of Marketing for Higher Education, 8*(2), 29–35. https://doi.org/10.1300/J050v08n02_03

Wong, W. H., & Chapman, E. K. (2022). Student satisfaction and interaction in higher education. *Higher Education, 85*(5), 957–978. https://doi.org/10.1007/s10734-022-00874-0

Yuan, K. (2023). Research on the construction of evaluation index system for satisfaction of college students with university services. *Journal of Education and Educational Research, 3*(1), 68–73. https://doi.org/10.54097/jeer.v3i1.8191

Yu-zh, H. (2006). A review of the American national student satisfaction study. *Comparative Education Review, 193*, 60–64.