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Critical Factors Affecting Student Satisfaction and Loyalty: An Empirical Study in Cambodia

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Abstract

This research aimed to investigate the key factors affecting student satisfaction and loyalty in selected private universities in Cambodia. The study implemented a quantitative survey designed and guided by seven hypotheses to test the causal relationships among variables, such as academic experience, faculty services, campus life, social integration, student support facilities, student satisfaction, university image, and student loyalty. The research applied a multi-stage sampling technique of probability procedures to guarantee the presence of the research population. Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were applied for data analysis to test the hypotheses model. The collected survey totaled 543 from three universities. The purposive sampling methods were used to select the three target universities, based on their reputation, the number of students, year of establishment, and the recognition from the Ministry of Education, Youth, and Sport. The stratified random sampling method was employed to select target respondents for data collection by dividing the population into subgroups to ensure a random sample. The results showed that student support facilities, campus life, and social integration, faculty services, and university image play very important roles in the satisfaction and loyalty of the students in three universities.

Keywords: Higher Education, University Image, Student Satisfaction, Student Loyalty

JEL Classification Code: I20, I23, M10

1. Introduction

Higher education (HE) is also known as tertiary education, and it refers to all post-secondary institutions, centers public and non-public educational institutions, technical training centers, and professional institutions. HE is essential to foster development, reduce deficiency, and stimulate joint success. A highly expert labor force, with

stable post-secondary education, is a precondition for invention and development. Knowledgeable citizens are extra employable, make a higher income, and withstand monetary tremors better than the rest (World Bank, 2021). The privatization of HE was a complete need in Cambodia. It was an extra means of meeting the inevitable claim of the population for a worldwide development, which indicated that HE was no more reserved for the elites (Lee & Healy, 2006). The necessity to privatize higher education institutions was also owed to the growing number of learners seeking HE and the inability of the state to finance them (Altbach, 2007).

In its rapid growth over the last 20 years, Cambodia enjoyed a fantastic rise in the number of higher learning institutions and universities, both public and private, particularly since the beginning of the New Millennium. The remarkable increase in number brings along widespread concern to found ethics to ensure the worth of HE, equity in educational access, and services for university students. The efforts of progress and transformation have faced many structural challenges. Just as academic literature refers to the “complexity” of higher education in general, Cambodian university leaders, policymakers, and educational researchers

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in general highlight the problem of “fragmentation” in the Cambodian HE sector (Ngoy et al., 2019). One of the main aspects which explain the fragmentation and complexity in the tertiary education sector in Cambodia is the lack of a unified governance structure and financial systems across all universities, a somewhat reluctant approach to regionalization and internationalization of academic quality; and to some extent, the slow adoption of the technology needed for the improvement (Phyrom et al., 2020). The issues have been brought to attention by various scholars, however, no study has been found in the literature on student satisfaction and loyalty at tertiary level education in Cambodia. Thus, this study addresses this need and focuses on explaining and examining factors that affect student satisfaction and loyalty at private higher education institutions (HEIs) in Cambodia.

2. Literature Review

2.1. Academic Experience (AE)

Astin (1999) stated that student involvement means the physical and psychological efforts students put forth toward their academic experiences. Astin stated that involved students spend a lot of time on campus, participate in student organizations, and regularly interact with faculty and peers. Student expectations of classroom presentation styles that embrace a more holistic manner of learning than print alone have increased as the characteristics of the college-age learner have changed. This would suggest that by combining text, visual imagery, and multimedia text, more elaborate contexts and meanings could be explored within the classroom setting. Speaker (2004) stated that the lecturer’s approach to technology for teaching and learning increased a student’s educational experience. Academic Experience was one of the areas of evaluating learner’s fulfillment in HEIs to evaluate the value of curriculum and education provided (Mai, 2005). Kinzie et al. (2008) and Moser (2012) explored the relationships between indicators of student success such as persistence and student engagement in effective educational practices focusing on historically underrepresented populations. Those authors found significant and positive relationships between student-teacher interactions and aspirations for degrees, satisfaction, grade point average (GPA), and other forms of cognitive and emotional development.

2.2. Student Support Facilities

Student support facilities such as learner’s maintenance materials, broadband skills, labs, and reading room facilities played a critical part in the accomplishment of learners in HEs. Institutions were turning to technology-based learning

models for new teaching approaches and using digital technology, information technology, and telecommunications as electronic teaching assistant (Kann, 2002). Understanding and initiating students’ needs to improve the quality of service in a computer lab is one of the critical indicators for student satisfaction (Ikolo, 2015). The frequency of student support varied by the university; many librarians offered personal support through face-to-face meetings, conferences, telephone calls, and virtual conferencing. The study was conducted for both private and public universities in Cambodia and the result revealed that learning materials were crucial for students, for example, modernized libraries, availability of latest material and collection, and sufficient audiovisual resources and computers for classroom teaching (Long et al., 2021).

2.3. Campus Life and Social Integration

Student involvement is optional participatory activities outside of the classroom offered to students to engage them in meaningful campus activities (Astin, 1984). Becoming involved and socially integrated into the campus community is a challenging feat for many students and is often a significant barrier for which could adversely affect their success in college. It was similarly believed that the more extra activities that students participate in community services, the more probable they will stay in university due to the social integration (Astin, 1975; 1993).

Having friends, sharing accommodation with other students, and relations with university staff positively affect social integration, although, the degree of academic and social integration can vary by institutes or institutional programs (Mannan, 2007). The National Survey on Student Engagement (NSSE) started in 2000 and was generated to help HEIs measuring student involvement on campus. Student’s involvement played a vital part in learner growth and affected the skills of learners on university grounds. (Kuh, 2001). Pascarella and Terenzini (1991) reported the interaction between students and institutions had a significant impact on student loyalty in higher education. Educational obligations such as the interaction of the faculty inside and outside of the classroom, dedication, and commitment of administrators and staff to student learning, high-quality university outreach programs, and community learning center were necessary for student growth (Astin, 1993).

2.4. Faculty Services

Astin (1993) found the behavior of teachers in the classroom is important for students’ success and satisfaction because it creates the framework for future

interactions between the teacher and the student outside of the classroom. When faculty members improved students' academic experience by engaging in conversation on knowledge and career potential, students were happier with their college experience (Terenzini & Pascarella, 1977). There were different opinions on the expectations of the students regarding the interaction between teachers. The study found that first-year students felt uncomfortable around the faculty, unlike the upperclassmen who look for more interpersonal relationships (Kuh, 1991). Thomas and Galambos (2004) revealed that interactions between teachers and students in the classroom were virtually connected to higher levels of student satisfaction. State examinations on learner fulfillment in Norwegian HEIs show a vital connection between the value of education and learner fulfillment. Faculty members had a significant impact on student satisfaction in the university through their interaction with students (Umbach & Porter, 2002). Self-realization and personal motivation of learning were related outcomes with students, resulted in a positive relationship with teachers (Shelton, 2003).

2.5. Student Satisfaction

Student satisfaction is defined as a positively influenced student assessment of different student experiences that a college or university offered (Oliver & DeSarbo, 1989). For the operations at HE, the satisfaction of undergraduate students was the measurement of all college experience and everything that was included in that experience such as the quality of teaching, the interaction between teachers and students, study program, administration, and learning facilities (Astin, 1993). Kamuche (2005) determined that satisfaction with specific institutional characteristics influenced students' decision to continue staying at his/her university/college or changed to another institution or dropped out of university education. Student satisfaction was a short-term attitude that resulted from evaluating a student's educational experience (Elliott & Healy, 2001).

2.6. University Image

The image and reputation of an institution were often more significant than quality since the image influenced the decisions of potential students. The image influenced learner fulfillment and student loyalty (Kotler & Fox, 1995; Eskildsen et al., 2000). The image of the university was defined in different ways. Alessandri et al. (2006) viewed it as "the public perception of the university." Palacio et al. (2002) has proved that the university image was formed by cognitive and affective components. The cognitive component of the university image influenced the affective

component of the image. The study of Mulyono (2020) showed that university image had a greater impact on student loyalty than student satisfaction.

2.7. Student Loyalty

The time that students spent in HEIs for years formed their knowledge and perception of the tertiary level. Alumnae, who had a satisfactory experience and thought that the academy had backed their achievement are extra committed, and make financial contributions, if possible (Sun, 2005). On the other hand, a learner who had an unsatisfactory experience may not be committed and as a result, institutional loyalty affected student motivation (Terry & Macy, 2007). These were additional benefits to maintain long-term student relationships, such as word of mouth from alumni (Ackerman & Schibrowsky, 2007). As with the development of customer loyalty, increasing student loyalty should take place throughout the student-university relationship life cycle (Rowley, 2003). The loyalty of learners from the framework of HEIs involved such manners as supportive, confident word-of-mouth towards declaring the college to others and choosing the same institution again in the future (Dado et al., 2012).

3. Research Methodology

3.1. Conceptual Framework

Figure 1 shows the conceptual framework of this study. The variables have been measured such as academic experience, faculty services, campus life, social integration, student support facilities, student satisfaction, university image, and student loyalty. Hence, there are seven hypotheses proposed for this study to determine factors affecting student satisfaction and loyalty in Cambodian Higher Education Institutions.

H1: Academic experience had a significant effect on student satisfaction.

H2: Student support facilities had a significant effect on student satisfaction.

H3: Campus life and social integration had a significant effect on student satisfaction.

H4: Faculty services had a significant effect on student satisfaction.

H5: University image had a significant effect on student satisfaction.

H6: Student satisfaction had a significant effect on student loyalty.

H7: University image had a significant effect on student loyalty.

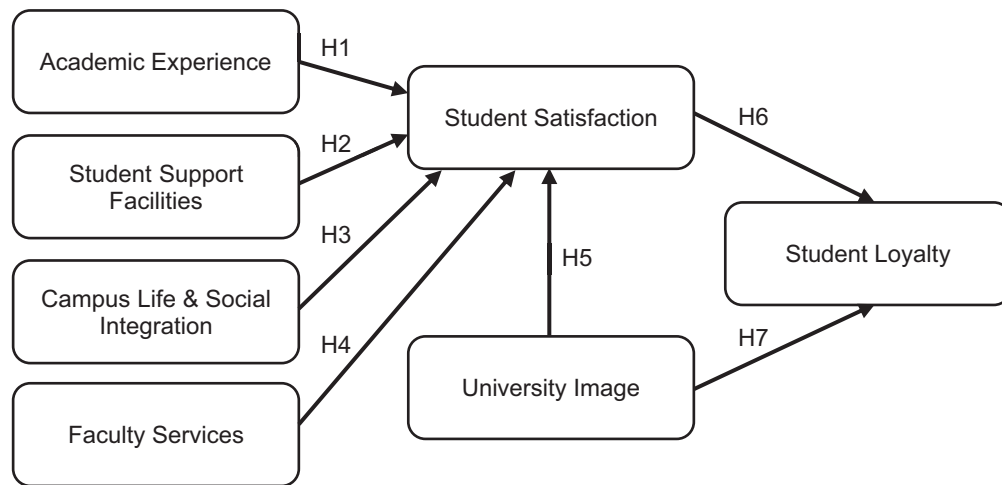


Figure 1: Conceptual Framework

3.2. Research Design

This research was conducted by performing a quantitative analysis of related variables that impacts student satisfaction and loyalty. Surveys were conducted with undergraduate students from 3 selected private universities to gather the required information. The survey questionnaire consists of 3 parts, screening inquiries, five points Likert scale with 7 latent variables and 35 observed items, and respondents' demographic profile. Likert scale was used to investigate hypotheses by diversity ranging from strongly agree (5) to strongly disagree (1).

3.3. Population and Sample Size

The population for this research are Bachelor's degree students from the three selected private HEIs and undertaking two different majors - Business and Management and TESOL, and in 1st year, semester 2 and above. Based on the calculation of the A-Priori Sample Size Calculator for Structural Equation Models (SEM), the suitable model sample size was at least 425 respondents for 7 latent variables and 35 observed variables with a probability level of 0.05, 600 questionnaires were distributed, and 543 were completed and qualified for the study.

3.4. Sampling Technique

The researcher applied a multi-stage sampling technique in this research study, where a step-by-step transition was made from a large sample to a narrow sample (Ackoff, 1953). The sampling process for this study consists of four steps. First, the purposive sampling method was used to select three private HEIs, based on their recognition,

number of students, and year of establishment. The selected universities were WU, BBU, and CMU. These universities are recognized by the Ministry of Education and Sport of the Royal Government of Cambodia. Second, a stratified random sampling method was employed by dividing the population into strata (or subgroups) and reserved a random sample for each subgroup based on personal experience, expert opinion, and the relevance of the general population rather than using statistics (Hair et al., 2013). The subgroups were based on the fields of undergraduate students, business, management, and Teaching English to Speakers of Other Languages (TESOL). The sample size was 543 respondents from three universities. In the third phase, the researcher used the convenience sampling technique to distribute the survey questionnaires to target students via close friends who are the top management of three selected universities. Finally, the judgment sampling technique and the purposive sampling methods were used to further distribute the survey questionnaires to the targeted random sample who are pursuing their Bachelor's degree in two different majors – Business and Management and TESOL, studying in 1st year, semester 2 and above, so that the respondents are familiar with HEIs. The sample size was adjusted and relatively divided among three selected HEIs as shown in Table 1.

4. Results and Discussion

4.1. Demographic Characteristics of the Respondents

In this study, 543 respondents have completed all the required items, and consist of 199 (36.6%) men and 344 (63.4%) women. There were 331 respondents

Table 1: Population and Sample Size by Selected HEIs

Name of Universities	Population Size	Sample Size of Total Population		Percentage (%) of Total Sample Size by University
		Sample Size (10%)	Number of Sample Size (N)	
Western University (WU)	2.435	10.0	243	45
Build Bright University (BBU)	1.921	10.0	192	35
Cambodian Mekong University (CMU)	1.082	10.0	108	20
Total	5.438	10.0	543	100

Table 2: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Factors Loading	CR	AVE
Academic Experience (AE)	Martirosyan (2015)	5	0.658–0.755	0.837	0.508
Student Support Facilities (SSF)	Martirosyan (2015)	3	0.650–0.782	0.758	0.512
Campus Life & Social Integration (CLSI)	Martirosyan (2015)	8	0.534–0.752	0.862	0.441
Faculty Services (FS)	Martirosyan (2015)	8	0.579–0.763	0.880	0.481
University Image (UI)	Ali et al. (2015)	3	0.587–0.818	0.712	0.458
Student Satisfaction (SS)	Ali et al. (2015)	5	0.796–0.873	0.925	0.713
Student Loyalty (SL)	Ali et al. (2015)	3	0.626–0.847	0.815	0.599

Note: CR: Composite Reliability; AVE: Average Variance Extracted; * p -value < 0.05.

in the 2nd year (57.3%), 190 respondents in the 3rd year (35%), and 42 respondents in the 4th year (7.7%). 335 respondents (61.7%) were majoring in Business and Management, and 208 respondents (38.3%) were in TESOL. Further, 162 respondents (29.8%) were in the morning session (8–11 AM), 135 respondents (24.9%) were in the afternoon session (2–5 PM), 231 respondents (42.5%) were in the evening session (5.30–8.30 PM), and 15 respondents (2.8%) were at the weekend session (Saturday and Sunday).

4.2. Confirmatory Factor Analysis (CFA)

CFA was used for analyzing the measurement model with structural equation modeling (SEM). The result of CFA indicated in Table 2 is all items in each variable were significant and had factor loading to prove discriminant validity. Guidelines recommended by Hair et. al. (2006) were employed in defining the significance of factor loading and acceptable values for the goodness of fit. Factor loadings are higher than 0.50 with a p -value of lower than 0.05. Furthermore, the Composite Reliability (CR) is greater than the cut-off point of 0.7 and the Average Variance Extracted (AVE) is higher than the cut-off point of 0.5 but, the study can accept 0.4 if AVE is less than

0.5 (Fornell & Larcker, 1981). Testing for discriminant validity was done by calculating the square root of each AVE (Fornell & Larcker, 1981). The values of discriminant validity shown in Table 3 are all higher than inter-construct/factor correlations, thus, the discriminant validity criterion is met.

4.3. Structural Equation Modeling (SEM)

SEM is further used to examine the relationship between observed variables and latent variables (Cheung, 2015). The structural model has been tested and adjusted to ensure the goodness of fit of the model. A fit model is benchmarked with the acceptable value of CMIN/DF, GFI, and TLI greater than 0.9 (Hair et al., 2006), AGFI greater than ≥ 0.85 (Schermelleh-Engel et al., 2003), NFI above ≥ 0.90 (Arbuckle, 1995), RMSEA and RMR less than <0.05 (Browne & Cudeck, 1993; Hair et al., 2006). The goodness of fit index is shown in Table 4. SEMs is calculated and the model is modified by using SPSS AMOS version 26, the goodness-of-fit index is CMIN/DF consistent with the degree of freedom of at p -value of 0.000, GFI = 0.905, AGFI = 0.886, NFI = 0.913, CFI = 0.958, TLI = 0.952, RMSEA = 0.039, and RMR = 0.030 (see Table 4).

Table 3: Discriminant Validity

Variables	SL	AE	SSF	CLSI	FS	UI	SS
SL	0.774						
AE	0.440	0.713					
SSF	−0.552	−0.470	0.716				
CLSI	0.656	0.531	−0.714	0.664			
FS	0.686	0.541	−0.658	0.642	0.694		
UI	0.545	0.378	−0.507	0.583	0.623	0.677	
SS	0.736	0.484	−0.553	0.590	0.629	0.596	0.844

Note: The diagonally listed value is the AVE square roots of the variables. Student Loyalty (SL), Academic Experience (AE), Student Support Facilities (SSF), Campus Life and Social Integration (CLSI), Faculty Services (FS), University Image (UI), and Student Satisfaction (SS).

Table 4: Goodness of Fit

Index	Acceptable Values	CFA Values	SEM Values
CMIN/DF	<3.00 (Hair et al., 2006)	1.859	1.840
GFI	≥0.90 (Hair et al., 2006)	0.903	0.905
AGFI	≥0.85 (Schermelleh-Engel et al., 2003)	0.883	0.886
NFI	≥0.90 (Arbuckle, 1995)	0.912	0.913
CFI	≥0.90 (Hair et al., 2006)	0.957	0.958
TLI	≥0.90 (Hair et al., 2006)	0.951	0.952
RMSEA	<0.05 (Browne & Cudeck, 1993)	0.040	0.039
RMR	<0.05 (Hair et al., 2006)	0.029	0.030

Note: CMIN/DF: The ratio of the chi-square value to the degree of freedom; GFI: goodness-of-fit index; AGFI: adjusted goodness-of-fit index; NFI: normalized fit index; TLI: Tucker-Lewis index; CFI: comparative fit index; RMSEA: root mean square error of approximation; and RMR: root mean square residual.

4.4. Research Hypothesis Testing Results

The result of the structural model hypotheses shown in Table 5 can explain the factors affecting student satisfaction and loyalty in Cambodian HEIs. Academic experience has no significant effect on student satisfaction with the standard coefficient value of 0.040. The finding is in contrast with the research of Kinzie et al. (2008), Moser (2012), and Carter and Yeo (2016) who found positive significant relationships between academic experience and satisfaction. This may imply that the academic courses undertaken by the respondents are mandatory courses to graduate from the study. Thus, whatever curriculum and team or classroom activities, it does not impact the student satisfaction in HEIs. Hence, H1 is not supported.

The result showed that student support facilities have a significant effect on student satisfaction with a standard coefficient value of 0.260. This result is supported by Ikolo (2015) and Long et al. (2021) who stated that support facilities such as digital hardware, virtual classroom, and

useful learning materials for students enhance their skills and in turn lead to their satisfaction. Hence, H2 is supported.

Campus life and social integration also have a significant effect on student satisfaction with the standard coefficient value of 0.379. This is consistent with the research of Pascarella and Terenzini (1991), Kuh (2001), and Nasser et al. (2008) who stated that the surrounding of the students, friends, campus staff, and campus living conditions are a critical driver of student satisfaction. The students have to spend years in HEIs, hence, favorable campus life and social integration matter to motivate and prolong their enjoyment. Hence, H3 is supported.

There is a significant effect of faculty service on student satisfaction. This finding is aligned with Morse and Santiago (2000), Umbach and Porter (2002), and Shelton (2003). Students' positive interactions with their teachers, community environment, and maintenance services are perceived as significant by the students for them to earn satisfaction while studying in HEIs. Hence, H4 is supported.

Table 5: Hypotheses Result of the Structural Model

Hypothesis	Standardized path coefficient (β)	t-value	Test Result
H1: Academic Experience \Rightarrow Student Satisfaction	0.040	0.892	Not Supported
H2: Student Support Facilities \Rightarrow Student Satisfaction	0.260	2.511*	Supported
H3: Campus Life and Social Integration \Rightarrow Student Satisfaction	0.379	3.251*	Supported
H4: Faculty Services \Rightarrow Student Satisfaction	0.418	4.505*	Supported
H5: University Image \Rightarrow Student Satisfaction	0.310	3.721*	Supported
H6: Student Satisfaction \Rightarrow Student Loyalty	0.580	8.269*	Supported
H7: University Image \Rightarrow Student Loyalty	0.337	4.837*	Supported

Note: *p-value < 0.05.

H5 and H7 are supported which states that university image has a significant effect on student satisfaction and student loyalty, which in line with the study of Chandra et al. (2019) and Osman and Saputra (2019). This means that the higher value that students give to HEIs image, the higher confidence and satisfaction students have. This will eventually form loyalty towards the HEI. Further, the finding agrees with Mulyono (2020) who stated that university image had a greater impact on student loyalty than student satisfaction.

Last, student satisfaction has a significant effect on student loyalty. As discussed above, positive experience and enjoyment perceived during their time in HEIs will lead to continuance in studying. This can also imply that the students are comfortable and trust in the curriculum of the university. This finding is supported by the research of Kamuche (2005) and Chandra et al. (2019). Hence, H8 is supported.

5. Conclusion and Limitations

This research was based on the development of a comprehensive model that examined the factors influencing student satisfaction and student loyalty in 3 selected private universities in Phnom Penh, Cambodia. The tests were conducted utilizing students' samples from private tertiary institutions, and the findings indicated that many factors (except academic experience) influence students' satisfaction and loyalty. Those factors play very important roles in student satisfaction and student loyalty in this particular setting.

First, although academic experience in this study is not significant to student satisfaction, the research still sees it as important for the stakeholders of HEIs to determine this correlation because academic courses are part of students' experience on campus. If the stakeholders are able to link these factors, their academic offering can better improve student satisfaction together with other factors in the study.

HEIs may offer free elect courses and activities so that students do not perceive all courses as mandatory.

Second, the student support facilities included library staff, library resources, and computer labs which are crucial for students. HEIs should continue to improve the support facilities such as qualified librarians who offer students and teachers proper guidance on learning materials to support the teaching-learning process of HEIs and which will result in student satisfaction.

Third, the findings of the study confirmed that campus life and social integration had positive influences. Thus, the university should continue to foster campus life and social integration which includes a sense of belonging of students, support from staff, and security for all students at the campus, offering a variety of intramural activities, and good living conditions in the residence halls. Student's involvement on campus played a vital part in learner's growth and affected the skills of learners on university grounds (Kuh, 2001).

Fourth, the findings also confirmed that faculty services had a positive influence. The faculty services consisted of quality of faculty's instruction, caring for individual students from faculty, fairness and unbiased treatment of individual students, providing timely feedback about student progress, taking consideration of student differences, faculty's availability during and after class, knowledge of faculty in the teaching field, and teaching assistant. The university must ensure that full-time and part-time teachers have appropriate knowledge in their field and level of education and meet the minimum standards. Faculty member's role in student satisfaction was vital as it was considered to be the closest connection to the student's education (Morse & Santiago, 2000). Faculty members had a significant impact on student satisfaction in the university through their interaction with students (Umbach & Porter, 2002). Self-realization and personal motivation of learning were related outcomes with students, which resulted in a positive relationship with teachers (Shelton, 2003).

Fifth, the findings of the study revealed that university image was connected with the optimistic perception of students at private universities in Cambodia. The image and reputation of an institution were often more significant than quality since the image influenced the decision of potential students (Kotler & Fox, 1995). The image influenced learner satisfaction and image also influenced student loyalty (Eskildsen et al., 1999).

Sixth, the findings of the study also showed that student satisfaction was associated with a positive perception of student aspects in HEIs in Cambodia. The student satisfaction indicators included satisfaction in decision making to register at a university, wisely choosing the university, doing the right thing in choosing the university, enjoyable experience at the university, and overall satisfaction with the university. Similarly, for private Korean universities, student satisfaction had a significant impact on student loyalty (Lee & Seong, 2020). Satisfaction with specific institutional characteristics influenced student decisions to remain at the college, or transfer to another university or quit the university (Kamuche, 2005).

Finally, the findings of the investigation confirmed that student loyalty was accompanied by a positive perception of students at HEIs in Cambodia. The student loyalty included continuing at the same university for a new course, continuing at the same university for further education, and recommending the university to friends and family members. Student loyalty should happen all over the student-university affiliation life cycle (Rowley, 2003). The loyalty of learners from the framework of HEIs involved such manners as support, confidence, word-of-mouth towards declaring the college to others, and choosing the same institution again in the future (Dado et al., 2012).

The limitation of the study was related to the technique used. The information was analyzed by SEM because it can explain cause and effect, and cross-sectional research but it limits inferences to causal relationships between variables. Therefore, a longitudinal study is needed to confirm the results over time and gain insight into the cause. This study was based on quantitative analysis; some information may not have been responded to and hence conclusions cannot be drawn. This needs to be combined in a qualitative method to get useful information from all stakeholders of HEIs such as teachers, the top management of universities, and policymakers. The results may also be limited by the sample size of the case study and it is possible to add more open-ended questions, variables that may be developed, and added to the study in the context of Cambodian HEIs. Another limitation was the time and budget for the study, especially during the Covid-19 pandemic. Last, the research focused solely on universities in Phnom Penh.

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