

EFFECT OF UNIVERSITY IMAGE, LOCATION, ROLE OF ACADEMIC STAFF AND CURRICULUM CONTENT ON STUDENT SATISFACTION: CASE STUDY OF SELECTED SRI LANKAN STATE UNIVERSITIES

Sriyalatha M.A.K.¹

Abstract

The main objective of this paper is to analyze the impact of quality of curriculum content, quality of physical facilities, role of academic staff, role of administrative staff, University location and image on student satisfaction of selected state universities in Sri Lanka. This study applied the structural equation model to analyze the data. Sample of the study was selected from Management Degree programs of five selected state Universities in Sri Lanka. Research findings confirmed the statistically significant impact on student satisfaction from quality of curriculum content, quality of University physical facility, role of academic staff and University location. The most influential variables on University image were University location and role of academics. Results revealed that for regional level Universities, especially in Sri Lanka, students are not happy with the available facilities, like accommodation, cafeteria, sanitary and curriculum content. Thus, policy makers in higher education sector can use these findings to formulate more suitable strategies and consider more allocation of funds on for further development of these Universities and policy makers can consider these findings when they plan for new establishments in the future.

Keywords: Quality of Curriculum Content, Quality of Physical Facilities, Role of Academics, Student Satisfaction, University Image, University Location

¹ Department of Business Economics, University of Sri Jayewardenepura, Sri Lanka. Email: kumuduni@sjp.ac.lk

1. Introduction

During the last few decades, higher education sector has met quite profound modifications. Specially, it is moving towards more competitive environment and that threatens the existence of some of the institutions. At the same time, education is becoming an internationally as well as a domestically traded commodity. This commodification of education has major repercussions on how we think about schooling and the university, the ownership and transmission of knowledge, retention and attracting students, etc. In the near future, it is anticipated that this situation will become even more complicated. With the synchronization of different academic degrees, the mobility and employability of students will be greater, therefore, the higher education institutes may lose a substantial number of their students and their human capital due to less competitiveness.

When we consider about the Sri Lankan context, higher education sector is dominated by state universities within the country. According to graduate tracer study (2017/18) about 20,000 students are graduated from state universities annually while about 3,500 from non-state educational institutes. Further, it shows that employment rate among both institutions is in similar position, and it takes around 66% while the lowest employment rate among management students at state universities was recorded by the Southeastern University. Among university students, on average, the failure rate is about 6% and there is an insignificant dropout rate too. Although higher education in the state universities is free, from student's point of view, there is an increasing tendency of failure rate and dropout rate in state universities. At the same time, most of the resources are centralized to the main universities and main cities and students are reluctant to enter some state universities. In this context, some students are happy or satisfied with the university education while other are not happy.

Within this context, the examination of the factors that affect potential students in choosing one higher education institute over another are very important for university administrators and other decision makers of these institutions in future. This study examined the factors affecting the student satisfaction of higher education in Sri Lankan state universities.

The main objective of this study was to examine the direct impact of university location, quality of physical facilities, quality of curriculum content, role of academic staff, role of administrative staff and university image on student satisfaction.

Other objectives of this study were as follows.

- To Examine the direct and indirect impact of the role of academics and university location on student satisfaction via university image of selected state universities in Sri Lanka
- To examine whether student satisfaction at state universities, differ significantly across groups characterized by gender, year of study and university

2. Literature Review

Institutions, Business organizations regardless of their industry or sector, are highly concerned about the satisfaction level of their customers who purchase goods or services to satisfy their need and wants, since it plays a major role in developing competitive advantage and in attracting new customers and retaining existing customers in an organization. Also, in the higher education setting, providing required facilities, updated curriculum, location of the institute, role of academics and non-academics and university image are considered as the most important factors which highly influence student satisfaction of educational institutes around the world.

The influence of university image on student satisfaction

The concept of image is highly important for organizations since it has a close relationship with the organization's name (Gatewood et al. (1993) and Arpan et al. (2003) indicated that image has often been used interchangeably with the term reputation. Many scholars have identified cooperate aspects of image from business perspective while few studies have focused on image in non-profit organizations like public education institutes.

Landrum et al. (1998) revealed that university image represents a valuable asset in this competitive arena. It influences not only the student's choices but also the community's attitude towards the institution. Wilson (1999) pointed out that image of the institution supports to formulate results-oriented communication to potential students and to attain a higher competitive position in the sector; and to boost its competitive nature. Nguyen and Leblanc (1998) found that satisfaction and corporate image have no significant relationship. On the other hand, Oliver and Linda (1981), Bolton and Drew (1991) and Fornell (1992); Weerasinghe and Fernando (2017) revealed that image has a significant strong impact on student satisfaction in regional universities in Sri Lanka. Palacio et al. (2002) found that the overall image impacts student satisfaction and these affective and cognitive components of image also have separate effects on student satisfaction. Alves and Raposo (2010) concluded that student's satisfaction in higher education shows significant relationship with its image, student expectations, perceived technical quality, functional quality, and perceived value. In contrast, Mallika Appuhamiilage and Torii (2019) found that there is a direct positive influence of university image on student satisfaction. Masserini et al. (2019) revealed image as the important predictor of student satisfaction in the higher education institutes. Asal et al. (2015) identified that perceived university image contributes to students 'perception of university competence, university reliability, and identification with the university.

On the other hand, many researchers found that university image is predicted by multiple variables such as academic staff, infrastructure facilities, academic programs/content, administrative procedure, university location and university environment (Arpan et al. 2003). In this circumstance, university image can be considered as a main determinant of student satisfaction (Alvis and Rapaso, 2010).

The influence of quality of physical facility and curriculum content on student satisfaction

In general, facilities are important for facilitating the smooth functioning of an organization (Karna and Julin, 2015). As indicated by Yusoff et al. (2015), Karna and Julin (2015) Hanssen and Solvoll (2015) and Weerasinghe and Fernando (2018), there is a statistically significant relationship between university facilities and student satisfaction levels. However, Douglas et al. (2006) and Navarro et al. (2005) revealed a statistically insignificant relationship between university facilities and student satisfaction level. In this study the quality of the physical facilities of the university was measured by considering the availability and adequacy of accommodation (hostels) facilities of the university, Library facilities of the university, cafeteria facilities and sanitary facilities of the university and scholarship programs (Mahapola, Bursary, other).

Sofroniou et al. (2020) revealed that teaching and organization management have greater influence on the student satisfaction. These two constructs include teaching techniques, other facilities, time management, course content and its organization.

The influence of other factors on student satisfaction

Apart from the above, different scholars have identified some other factors that determined students' satisfaction in higher education. These scholars have pointed out that student satisfaction is a multidimensional process which is influenced by different factors.

From the perspective of Appleton-Knapp and Krentler (2006), influences on student satisfaction in higher education were classified into two components as personal and institutional factors. According to them, personal factors are referred as age, gender, employment, preferred learning style, student's GPA whilst they consider institutional factors as the quality of instruction, promptness of the instructor's feedback, clarity of expectation and teaching style.

Helgesen and Nettet (2007) examined student satisfaction at a university in Norway and found that service quality, institutional information and guidelines, student social interactions, satisfaction with facilities, and student commitment have a significant relationship with student satisfaction. According to Wilkins and Balakrishnan (2013), quality of lecturers, quality of physical facilities and effective use of technology served as key determinant factors of student satisfaction. On the other hand, quality of classroom, quality of feedback, lecturer-student relationship, interaction with fellow students, course content, available learning equipment, library facilities and learning materials revealed greater influence on student' satisfaction (Kuh and Hu, 2001; Sojkin et al., 2012).

Palacio et al. (2002) and Douglas et al. (2006) identified that, teaching ability, flexible curriculum, university status and prestige, independence, caring of faculty, student growth and development, student centeredness, campus climate, institutional effectiveness, and social conditions as major determinants of student satisfaction in higher education.

Weerasinghe and Fernando (2018) concluded that lecture room facilities, library facilities, accommodation facilities, employment facilities and entertainment

facilities strongly influenced student satisfaction. Farahmandian et al. (2013) identified that there is a positive and significant correlation between the factors of advising, curriculum, teaching quality, financial assistance, tuition costs and facilities with student satisfaction in one of the public universities in Malaysia. Gruber et al. (2010) examined perceived service quality and satisfaction at a German University. Findings of the study revealed that students of this university were highly dissatisfied with the facilities such as university buildings and the quality of the lecture theatres.

Annamdevula and Bellamkonda (2016) showed that the service quality; measured in terms of physical facilities and library, lab, and computer facilities etc. as a key antecedent to student satisfaction. Weerasinghe and Fernando (2018) revealed that there was a statistically insignificant influence of the quality of the academic staff, the quality of the administrative staff and the quality of the university location, on the student satisfaction in some selected state universities in Sri Lanka. Weerasinghe and Dedunu (2017) revealed that quality of academic staff has a small direct impact on student satisfaction meanwhile there was a big indirect impact through university image on student satisfaction. According to research findings they highlight that university image works as mediating variable and improves the impact of quality of academic staff on student satisfaction.

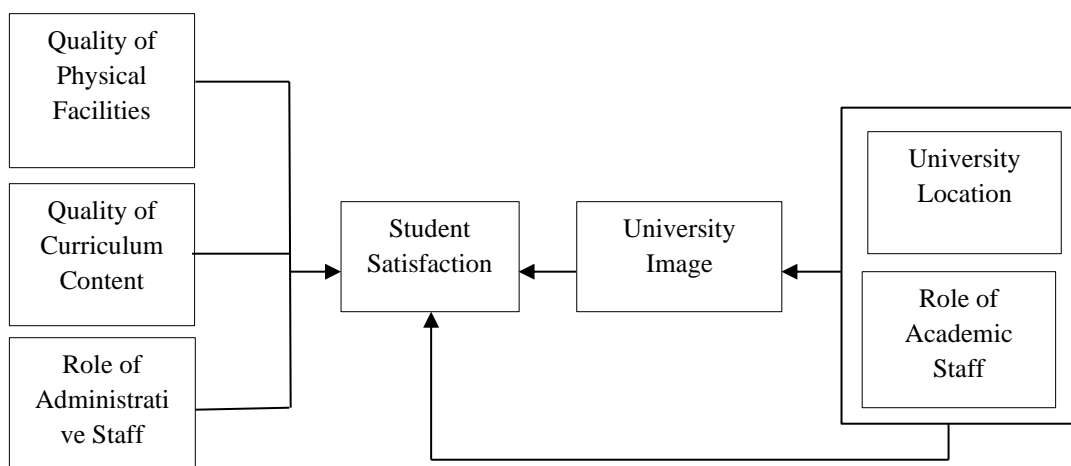
The influence of demographic factors on student satisfaction

Corts et al. (2000) showed that there was no significant difference between contributing factor of satisfaction among male and female as well as the year of study. Yusoff et al. (2015) examined the influence of demographic factors on satisfaction. They found that junior students were more satisfied with student support facilities and the class sizes as compared to the year 2 and year 3 students. Wilkins and Balakrishnan (2013) used the logit model to predict whether a student at a branch campus in the UAE was satisfied or not satisfied with their institution. Findings of the study revealed that regional-level university students exhibit lower degrees of satisfaction than metropolitan areas' university students. Further, they investigated whether there was a relationship between groups of students characterized by gender, nationality and level of program and satisfaction with their institution. The results indicated that none of the associations between the clusters and levels of satisfaction were significant. In this study, the effect of gender, the year of study and university location on student satisfaction were examined

Though there are large numbers of literature on the theme of customer satisfaction and loyalty, only a few studies are available on student satisfaction and curriculum content, quality of physical facilities, role of academic staff, role of administrative staff and university location simultaneously in higher education, especially in the Sri Lankan context and, while assessing previous literature, it indicates inconsistent findings on student satisfaction and its antecedents in different regions and or country. Therefore, this study focused on examining the link between the quality of curriculum content, quality of physical facilities, role of academic staff, role of administrative staff and university location on student satisfaction in the Sri Lankan context by applying Structural Equation Modeling (SEM) analysis with R Studio program.

The conceptual model of the student satisfaction and image is illustrated in Figure 01. University image is indicated as a mediating variable in this model. Independent variables of this study are university location, quality of physical facility, quality of curriculum content, role of academic staff and role of administrative staff while the dependent variable of the study is student satisfaction. The university image is determined by image itself as well as by university location and role of academic staff.

Figure 1: Conceptual framework



The following hypotheses were developed to examine the impact of university facilities, curriculum content, role of administrative staff and academics and university location, on student satisfaction at state universities in Sri Lanka.

Hypothesis 1: University location, quality of physical facilities, quality of curriculum content, role of academic staff and role of administrative staff have significant impact on student satisfaction

Hypothesis 2: University image has significant mediating impact on student satisfaction

Hypothesis 3: There is no significant student satisfaction differences among gender, year of study and university

3. Data, Sample and Methodology

This study employed positivist method with deductive approach. An individual student was considered as the unit of study in this study. Given the intended objectives of this study, quantitative data were collected by using questionnaires. The survey questionnaire contained four demographic questions and the 31 questions (7-point Likert scale) was used for the further analysis. Data were collected from December 2019 to January 2020.

Given the technical impossibility of including all state universities of higher education in Sri Lanka, an option was made to restrict this study to selected public universities in Sri Lanka. The target population consisted of Management undergraduates of selected state universities in Sri Lanka; namely, University of Sri Jayewardenepura (USJP), University of Kelaniya (UK), University of Peradeniya (UP), Eastern University of Sri Lanka (EUSL) and University of Jaffna (UJ). The population of the study was around 6000 students who had enrolled for Management and Commerce stream at state universities. Out of 6000 students about 1200 students enter USJP every year and 700, 600 400 and 200 students enroll in Management and Commerce stream into UK, UJ, EUSL and UP respectively (UGC statistics, 2019). The universities were selected based on the history of commencing of Management education system among universities. The sample size was 600 and the sampling method was stratified sampling technique. The total number of responses were 529 while there were 22 outliers. Finally, 507 responses were taken into consideration for the analysis. In order to ensure the suitability of the questionnaire, a pre-test of the questionnaire was conducted with 25 samples.

4. Results and Discussion

Quantitative data were analyzed using SPSS 21.0 and R Studio 3.5.1 software. As the first step of the analysis, the measurement model was tested with confirmatory factor analysis (CFA) and then the SEM was applied to test the hypotheses of the study. The 507 student respondents consisted of 36 percent males and 64 percent females. 55 percent of the students were in their fourth year of study, 23 percent in their third year and 22 percent in their second year of study. About 48 percent of the students were from USJP and 52 percent from other selected state universities (See Table 1).

Table 1: Demographic characteristics of the sample

Variable	Frequency	Percent
Gender		
Male	184	36.0
Female	323	64.0
University		
Sri Jayewardenepura	244	48
Other Universities	263	52
Year of Study		
Fourth Year	279	55
Third Year	115	23
Second Year	113	22

Source: Author compiled based on survey data

The results of the CFA ranged from 0.5 to 0.9. This study used Cronbach's alpha (reliability coefficient) to measure internal consistency and all the Cronbach's alpha values were greater than the threshold value 0.70 (Nunnally, 1967) (Table 2).

In addition to the above, the values of Average Variance Extracted (AVE) were also examined to determine the convergent validity of the constructs. The results

indicated that the values of AVE for all constructs were greater than 0.5. It proposed adequate convergent validity as suggested by (Hair et al., 2010).

Few essential measurements were taken into consideration to ensure the model fit: Goodness of Fit Indices (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR). Model fit indicators revealed a good fit, as GFI was greater than 0.80, and RMSEA and SRMR were less than 0.8 (Li-tze Hu and Peter M. Bentler (1999)) of the models. The model had an adequate fit to the data: chi square per degree of freedom $(298.99/136) = 2.198$, was less than 3. The specific model fit measurements are shown in Table 3.

Table 2: Values of Cronbach's Alpha

Overall Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0.854	0.858	7
Construct	Cronbach's alpha	AVE
University Image	0.845	0.533
Role of Academic Staff	0.821	0.642
Quality Curriculum Content	0.823	0.634
Quality Physical Facilities	0.847	0.528
Role of Administrative Staff	0.840	0.459
University Location	0.828	0.599
Student satisfaction	0.827	0.604

Source: Adapted from data analysis results

Thereafter SEM was employed by using R Studio Software. After testing various regression equations, the following models were finalized, which provided higher goodness-of-fit measures in this analysis.

Table 3: Result of the Goodness of Fit indices

The Goodness of Fit indices	Cur-off *	Results	Conclusion
Chi-Square		286.46	Fit
Probability	≥ 0.05	0.000	Fit
GFI	≥ 0.9	0.92	Fit
AGFI	≥ 0.9	0.887	Marginal
TLI	≥ 0.9	0.934	Fit
CFI	≥ 0.9	0.948	Fit
RMSEA	0.05 - 0.08	0.053	Fit
RMSR	> 0.08	0.044	Fit

Note: * Li-tze Hu and Peter M. Bentler (1999)

Source: Adapted from data analysis results

The results of SEM model (see Table 4) showed that four factors, namely quality curriculum content, quality of physical facility, and university location had positive and significant impact on student satisfaction, whereas role of administrative staff had insignificant and negative influence on student satisfaction. Most of the constructs had positive and direct impact on student satisfaction among selected state universities. Among these factors, the most influential factor was the quality of

curriculum content followed by location. It was indicated that in the western context also curriculum and facilities play a key role in determining student satisfaction as stated by Martirosyan (2015). The dream of most universities in the world is that to meet the changing demand and to maintain a competitive position in the sector. In order to achieve this, providing quality education is vital.

Two factors positively affect university image: university location, and role of academic staff, (see Figure 2 and Table 4). Three factors, namely quality of curriculum content, quality of physical facility and university location do have direct influence on student satisfaction; however, university location and role of academic staff indirectly influence student satisfaction through university image. The tested model is shown in Figure 2 and it indicates the standardized regression weights of the final model of the study of the whole sample.

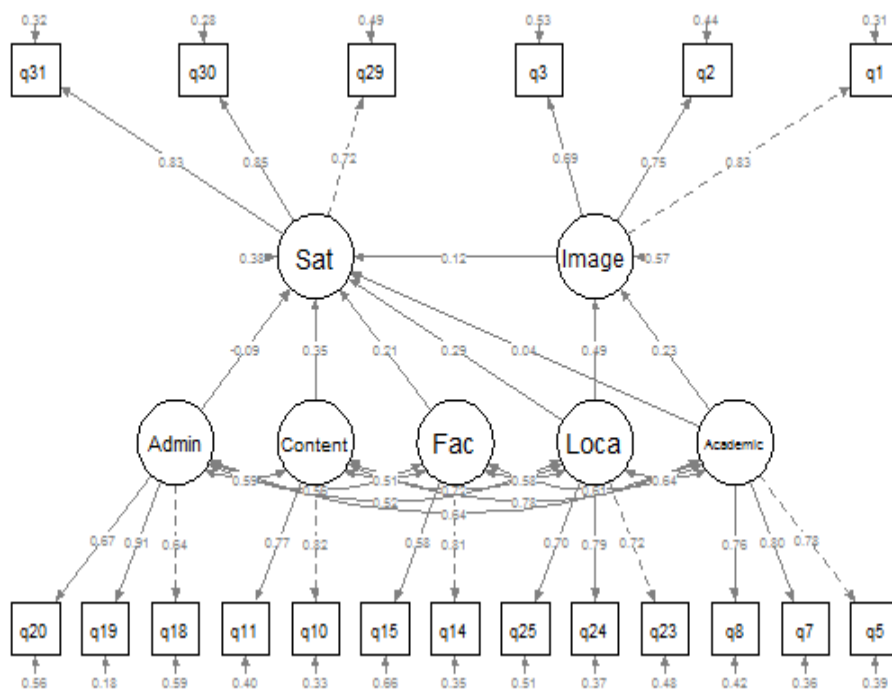
The effect of the role of academics via university image on student satisfaction is also significant and positive (0.227). It was proven that it was significant, and its influence was more important as found by Weerasinghe and Dedunu (2017), Weerasinghe and Fernando (2018), Ali et al. (2016), Teeroovengadum et al. (2019) and Douglas et al. (2006). Most of the scholars revealed that corporate image is the function of the accumulated effect of (dis)satisfaction [Fornell, (1992), Oliver, & Linda, (1981)].

Table 4: Results of SEM analysis for all universities

Regressions	Std. Path Coefficient (β)	z-value	P(> z)
Satisfaction			
Quality of Curriculum Content	0.351	2.529	0.001
Quality of Physical Facility	0.210	2.640	0.008
Role of Administrative Staff	-0.092	-1.559	0.119
University Location	0.287	2.436	0.015
University Image	0.116	1.604	0.109
Role of Academic Staff	0.042	0.371	0.711
University Image			
University Location	0.490	5.520	0.008
Role of Academic Staff	0.227	2.633	0.000

Source: Adapted from data analysis results

Figure 2: Structural equation model of student satisfaction



Note: Sat = Student satisfaction, Image = University Image, Loca= University Location, Admin = Role of Administrative Staff, Fac = Quality of Physical Facility, content = Quality of Curriculum Content and Academic = Role of Academic Staff

Next section presents the best results of other sub analysis in terms of university, year of study and gender.

Effect of university, year of study and gender on student satisfaction

The Faculty of Management Studies and Commerce (FMSC) at University of Sri Jayewardenepura is the largest faculty in terms of number of students in the university system in Sri Lanka and was founded in the 1960s and has a proud history and heritage as the pioneering Faculty for Management Education in Sri Lanka. As the largest faculty in Management Studies and Commerce, it currently enrolls more than 5,000 internal undergraduate students. Another major concern is that most of the students from commerce stream prefer to enroll with FMSC degree programs since it has a proud history and a good reputation. Therefore, in this study, first the researcher tried to identify which construct impacted student satisfaction and university image at USJP compared to other selected state universities.

Table 5 reported results of the goodness of fit under three main sub samples; namely university, year of study and gender. Most of the fitness indexes values achieved the required level and therefore, the models were good enough for the analysis.

Table 5: Result of the Goodness of Fit for sub analysis

The Goodness of Fit indices	University		Year of Study		Gender	
	USJP	Other	Four Year	2 nd & 3 rd Year	Male	Female
Chi-Square	355.074	182.621	288.089	194.819	231.430	243.237
Probability	0.000	0.004	0.000	0.000	0.000	0.000
GFI	0.829	0.912	0.885	0.88	0.860	0.901
AGFI	0.761	0.876	0.838	0.83	0.804	0.862
TLI	0.848	0.959	0.892	0.918	0.905	0.927
CFI	0.879	0.968	0.915	0.935	0.924	0.943
RMSEA	0.090	0.058	0.073	0.071	0.074	0.058
RMSR	0.063	0.049	0.059	0.051	0.064	0.049

Source: Adapted from data analysis results

In terms of university attributes, the estimated SEM result is shown in Table 6. The result confirmed that quality of curriculum content has a significant strong impact on student satisfaction in USJP while the role of administrative staff has revealed a significant negative impact on student satisfaction. It is the outcome of several actions taken by state universities as well as the University Grants Commission (UGC) to ensure the quality of degree programs, such as providing more opportunities for academic staff to enhance knowledge, skills and attitude in local as well as international level and increase association between local and foreign universities by signing Memorandums of understanding (MOUs). The UGC and the Ministry of Higher Education (MoHE) have published Internal Quality Assurance Manual and established Internal Quality Assurance Units for the universities to enhance quality of degree programs in recent years

There is a significant positive and direct effect from university location on university image and positive, insignificant, and direct effect from academic staff. On the other hand, results revealed that there is a positive and significant indirect impact on student satisfaction from university location via the university image in USJP.

In other universities also, students considered university image and location as important for student satisfaction. Chandra et al. (2019) reported that university image has positive and significant impact on student satisfaction. Except USJP, all other universities are located far from the capital of Sri Lanka, Colombo city. The students from other universities believe that the university location and the role of academic staff played a big role in creating university image. Both constructs revealed a positive significant relationship with the image. It indicates that location as well as academic staff played an important role in building the image of the university and then it enhances student satisfaction. Thus, it is not the matter whether students are from regional universities or main universities like USJP, all state universities students considered the image of the university as an important factor for student satisfaction.

Accordingly, for other universities, there was a big impact from university location on student satisfaction and these results were contradictory with the findings of Weerasinghe and Fernando (2018).

Table 6: Results of SEM analysis - USJP and other universities

Regressions	Std. Path		z-value		P(> z)	
	Coefficient (β)					
	USJP	Other	USJP	Other	USJP	Other
Satisfaction						
Quality of Curriculum Content	0.779	0.103	5.440	0.889	0.000	0.374
Quality of Physical Facility	0.334	0.200	3.095	1.505	0.002	0.132
Role of Administrative Staff	-0.208	-0.028	-2.139	-0.360	0.032	0.719
Location	-	0.388	-	2.959	-	0.003
University Image	0.047	0.281	0.433	2.760	0.665	0.006
University Image						
Location	0.549	0.306	3.158	2.354	0.002	0.019
Role of Academic Staff	0.199	0.412	1.185	2.958	0.236	0.003

Source: Adapted from data analysis results

As indicated in Table 7 results based on the year of study, there could not be seen any consistency about student satisfaction. There was direct positive effect from university image, curriculum content and facility on satisfaction among fourth year students. Furthermore, there was a strong positive and significant impact from location and academic staff via image on student satisfaction among fourth year students. As fourth year students have more experience and understanding about the university system, they are highly satisfied about the curriculum, academics and also facilities available at the university. However, for the other years of study as indicated in Table 7, there was a strong positive and significant direct effect on student satisfaction from university location and academic staff.

Table 7: Results of SEM analysis –fourth year and other

Regressions	Std. Path		z-value		P(> z)	
	Coefficient (β)					
	Fourth Year	2 nd & 3 rd Year	Fourth Year	2 nd & 3 rd Year	Fourth Year	2 nd & 3 rd Year
Satisfaction						
Quality of Curriculum Content	0.433	0.261	3.362	1.622	0.001	0.105
Quality of Physical Facility	0.216	-	2.246	-	0.025	-
Role of Administrative Staff	-0.099	-0.121	-1.286	-1.087	0.198	0.277
Location	0.179	0.586	1.396	2.828	0.163	0.005
University Image	0.161	0.122	1.846	1.251	0.065	0.211
University Image						
Location	0.524	-	5.978	-	0.000	-
Role of Academic Staff	0.240	0.661	2.801	6.800	0.005	0.000

Source: Adapted from data analysis results

As shown in Table 8, according to the results of the gender analysis on satisfaction, there was no consistency between the two groups in terms of satisfaction. Female students were highly concerned about the university location and curriculum

content, while male students give priority for curriculum content and facilities of the university. According to Sri Lankan cultural values, female students were always concerned about location which is a place with safety and security, ease of access and friendliness of the university environment. On the other hand, male students were highly concerned about the curriculum content and physical facilities of the university.

According to gender analysis, results indicated that without discrimination both the groups were highly concerned about the curriculum content. All this sub analyses also confirmed that university location had the largest impact on student satisfaction. University image is directly influenced by the role of academics and university location. Its' implication is that if higher education establishments want to survive in the future, the first step to take is to establish and maintain the university image continuously. As indicated by Wilkins and Balakrishnan (2013) and Martirosyan (2015), student satisfaction levels were determined by different factors and level of satisfaction of these variables also differ according to the type of university they attend i.e., metropolitan area or regional level.

Table 8: Results of SEM analysis – male and female students

Regressions	Std. Path		z-value		P(> z)	
	Coefficient (β)		Male	Female	Male	Female
	Male	Female				
Satisfaction						
Quality of Curriculum Content	0.639	0.269	3.550	2.568	0.000	0.010
Quality of Physical Facility	0.264	0.146	2.199	0.996	0.028	0.319
Role of Administrative Staff	-0.196	-0.120	-1.299	-1.753	0.194	0.080
University Image	0.152	0.126	1.294	1.429	0.196	0.153
Location	-	0.484	-	2.506	-	0.012
University Image						
Location	0.183	0.427	1.958	3.322	0.050	0.001
Role of Academic Staff	0.601	0.255	4.581	1.866	0.000	0.062

Source: Adapted from data analysis results

In almost all cases results of the alternative structural models suggested that hypothesis two was accepted, which is the role of academic staff and university location have a direct impact on university image.

5. Conclusion

The inception of globalization and modernization has created high competition among higher education systems and competition among student attraction. To develop competitive strategies to attract and retain students in the university system, student satisfaction also plays a vital and an important role. Thus, the main objective of this study was to examine the impact of quality of curriculum content, quality of physical facilities, role of academic staff, role of administrative staff, university location and university image on student satisfaction.

This study confirmed that the most influential constructs on student satisfaction in higher education in all selected state universities are quality of curriculum content followed by university location. University location has a positive

and significant influence on both student satisfaction and university image. Another important factor which influenced on student satisfaction in state universities in Sri Lanka is the quality of physical facilities provided by the universities. Meantime, role of administrative staff has insignificant and negative influence on student satisfaction.

The results of the sub analysis revealed that the greatest influence on the student satisfaction in USJP is from curriculum content and significant negative effect from administrative staff. Among other universities, students considered university image and location as important for student satisfaction.

Managerial implications

The students who are enrolled in different degree programs in management field are highly satisfied about university location, quality of curriculum content, and quality of facilities provided by these universities in general. When we considered gender differences, the year of study and university, we found that there were some dissimilarities in the findings. Therefore, this study provides important information for university administrators and educational policy makers as well as academia to design curriculum content, expanding facilities and to decide suitable locations for new establishments.

Another important implication of this study is that there is an insignificant influence of the role of administrative staff on student satisfaction. Like academic staff, administrators always get involved in student matters. If this picture lasts in the future too, it might cause to create a lethargic situation among students. So, administrators need to pay their attention to sort out issues to ensure smooth functioning of the university system.

Recommendations

According to the findings in Table 6, curriculum content and physical facilities are not significant for other universities with relation to satisfaction. It is an indication of dissatisfaction regarding the available facilities and curriculum content on average. Thus, the author would like to suggest that the university administrators have to consider ways and methods that can provide their service in better way to improve student satisfaction. Especially regional universities need to improve by updating curriculum content and provide better facilities such accommodation, library facilities and cafeteria, sanitary facilities to achieve higher satisfaction among students.

Limitations

This study found valuable insights into the dimensions of Sri Lankan student satisfaction; however, there are some limitations in generalizing the results to the higher education system in Sri Lanka. Therefore, future studies could be undertaken to identify the dimensions of student satisfaction with larger sample in order to get more reliable findings.

Acknowledgment

The author is much thankful to the student, W.M.A.K. Wickramasinghe who provided the data set to carry out this research study.

References

- Annamdevula, S., & Bellamkonda, R.S. (2016). The effects of service quality on student loyalty: the mediating role of student satisfaction, *Journal of Modelling in Management*, 11(2), 446-462. <https://doi.org/10.1108/JM2-04-2014-0031>
- Alves, H. & Raposo, M. (2010). The influence of university image on student behavior, *International journal of Educational Management*, 73-85
- Ali, F., Zhou, Y., Hussain, K., Nair, P K A. & Ragavan, N.A. (2016). Does higher education service quality effect student satisfaction, image, and loyalty, *Quality Assurance in Education*, 24(1), 70 -94
- Arpan, L., Raney, A. & Zivnuska, S. (2003). A cognitive approach to understanding university image, *Corporate Communications*, 8(2), 97-113
- Appleton-Knapp, S. & Krentler, K. (2006). Measuring student expectations and their effects on satisfaction: the importance of managing student expectations, *Journal of Marketing Education*. 254-264
- Aghaz A., Hashemi A., Maryam S. & Atashgah S. (2015). Factors contributing to university image: the postgraduate students' points of view, *Journal of Marketing for Higher Education*, 25(1), 104-126, DOI: 10.1080/08841241.2015.1031314
- Bolton, R. & Drew, J. (1991). A multistage model of customers' assessments of service quality and value, *Journal of Consumer Research*, 17 (5), 1533-1549, DOI 10.1108/BIJ-07-2018-0212
- Corts, D.P., Lounsbury, J.W., Saudargas, R.A., & Tatum, H, E., (2000). Assessing undergraduate satisfaction with an academic department: a method and case study, *College student Journal*, 34(3), 399-408
- Douglas, J., Douglas, A. & Barnes, B. (2006). Measuring students' satisfaction at a UK university, *Quality Assurance in Education*, 14, 251-267
- Farahmandian, S., Minavand, H. & Afshard, M. (2013). Perceived service quality and students' satisfaction in higher education, *Journal of Business and Management*, 12(4), 65-74
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience, *Journal of Marketing*, 56, 6-21
- Gatewood, R.D., Gowan, M.A. & Lautenshlager, G.J. (1993). Corporate image recruitment image, and initial job choice decisions, *Academy of Management Journal*, 36(2), 414-427.
- Gruber, T., Fuß, S., Voss, R. & Gläser-Zikuda, M. (2010). Examining student satisfaction with higher education services: Using a new measurement tool, *International Journal of Public Sector Management*, 23(2), 105-123. <https://doi.org/10.1108/09513551011022474>
- Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010), *Multivariate data analysis: a global perspective*, Prentice-Hall, New York, NY
- Hanssen, T.E.S. & Solvoll, G. (2015). The importance of university facilities for student satisfaction at a Norwegian university, *Facilities*, 33(13/14), 744-759, <https://doi.org/10.1108/F-11-2014-0081>

- Helgesen, O., & Nettet, E. (2007). What accounts for students' loyalty? Some field study evidence. *International Journal of Educational Management, 21*(2), 126-143
- Karna, S. & Julin, P. (2015). A framework for measuring student and staff satisfaction with university campus facilities, *Quality Assurance in Education, 23*(1), 47-61
- Kuh, G. & Hu, S. (2001). The effects of student-faculty interaction in the 1990s, *Review of Higher Education, 24*(3), 309-332
- Landrum, R., Turrisi, R. & Harless, C. (1998). University image: the benefits of assessment and modeling, *Journal of Marketing for Higher Education, 9*(1), 53-68
- Li-tze Hu & Peter M. B (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives, *Structural Equation Modeling, A Multidisciplinary Journal, 6*(1), 1-55, doi.org/10.1080/10705519909540118
- Mallika Appuhamilage, K.S. & Torii, H. (2019). The impact of loyalty on the student satisfaction in higher education: A structural equation modeling analysis, *Higher Education Evaluation and Development, 13*(2), 82-96. <https://doi.org/10.1108/HEED-01-2019-0003>
- Martirosyan, N. (2015). An examination of factors contributing to student satisfaction in Armenian higher education, *International Journal of Educational Management, 29*(2), 177 -191
- Masserini, L., Bini, M. & Pratesi, M. (2019). Do quality of services and institutional image impact students' satisfaction and loyalty in higher education?, *Social Indicators Research, 146*, 91–115. <https://doi.org/10.1007/s11205-018-1927-y>
- Navarro, M.M., Iglesias, M.P. & Torres, P.R. (2005). A new management element for universities: satisfaction with the offered courses, *International Journal of Educational Management, 19*(6), 505 -526
- Nguyen, N. & Leblanc, G. (1998). The mediating role of corporate image on customer retention decisions: an investigation in financial services, *International Journal of Bank Marketing, 16*(2), 52-65
- Nunnally, J.C. (1967). *Psychometric Theory*, McGraw Hill, New York, NY
- Oliver, R. L. & Linda, G. (1981). Effect of satisfaction and its antecedents on consumer preferences and intention, *Advances in Consumer Research, 8*, 88-93
- Palacio, A., Meneses, G. & Pe´rez, P. (2002). The configuration of the university image and its relationship with the satisfaction of students, *Journal of Educational Administration, 40*(5), 486-505
- Sojkin, B., Bartkowiak, P. & Skuza, A. (2012). Determinants of higher education choices and students' satisfaction: the case of Poland, *Higher Education, 63* (5), 565-81
- Sofroniou A., Premnath B. and Poutos K. (2020), Capturing student satisfaction: a case study on the national student survey results to identify the needs of students in STEM related courses for a better learning experience, *Education Sciences, 10*, doi:10.3390/educsci10120378

- Teeroovengadam, V., Nunkoo, R., Gronroos, C., Kamalanabhan, T.J. & Seebaluck, A.K. (2019). Higher education service quality, student satisfaction and loyalty: Validating the HESQUAL scale and testing an improved structural model, *Quality Assurance in Education*, 27(4), 427-445, <https://doi.org/10.1108/QAE-01-2019-0003>
- Weerasinghe, I.M.S. & Dedunu, H. (2017). University staff, image and students' satisfaction in selected state universities, *IOSR Journal of Business and Management*, 19(5), 34-37
- Weerasinghe, I.M. .S. & Fernando, R. (2018). University facilities and students' satisfaction in Sri Lanka, *International Journal of Educational Management*, 32(5), 866-880. <https://doi.org/10.1108/IJEM-07-2017-0174>
- 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>
- Wilkins, S. & Balakrishnan, M. S. (2013). Assessing students' satisfaction in transnational higher education, *International Journal of Educational Management*, 146-153
- Wilson, A. (1999). Strategic imaging in academe: a study of college and university images as perceived by prospective college students, Dissertation submitted as partial fulfillment of the requirements for the Doctor of Philosophy Degree, Southern Illinois University, Carbondale, IL
- Yusoff, M., McLeay, F. & Woodruff-Burton, H. (2015). Dimensions driving business student satisfaction in higher education, *Quality Assurance in Education*, 23 (1), 86 -104