



Effect of SRM (Student Relationship Management) on Student Satisfaction: A survey-based analysis on undergraduates across various computer education institutes in Patiala, Punjab

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ABSTRACT

This research developed a model of student satisfaction through literature review, identifying factors influencing perceptions of higher education institutions. A questionnaire was designed to survey student opinions, and regression analysis validated the model, with 50% of the variation in satisfaction explained by the identified factors. Key contributors to student satisfaction included infrastructure such as libraries, labs, and sports facilities, technology, and placement services. Technological tools like Learning Management Systems (LMS), smartboards, and communication platforms such as WhatsApp were significant influencers of satisfaction and performance. Placement services emerged as vital, while curriculum design showed limited impact. This study emphasizes the importance of meeting student expectations for a conducive learning environment, good academic facilities, and robust career support. Enhanced student satisfaction can boost institutional reputation and rankings, attracting dedicated students and ensuring sustainable growth.

Keywords: Curriculum Design, Placement Services, Student Relationship Management, Student Opinion, Student Satisfaction, Technological Tools.

1. INTRODUCTION

Satisfaction is the feeling of contentment, fulfilment, and completeness. It results from various aspects both internal and external. It can be viewed in context of objects of our ownership/use or people of our in-group or institutions that we may be linked/associated. Satisfaction often results in increased wellbeing. College is one of the places where each student has certain expectations and satisfaction related to this is based on fulfilment of these expectations. According to statista.com (2023), the overall level of satisfaction of students with higher education in India had decreased significantly in 2020. About 66% of the students were satisfied with the course earlier in the country and this had decreased to 53%. The satisfaction of a college student with their university depends on many factors both academic and non-academic. As for others, students' satisfaction too depends upon the accomplishment of their aspirations. What do they expect? - a good environment, good studies and ultimately good job opportunities and placement with good salary. At the very core, a student is also a kind of customer for the educational institution and thus ensuring gratification is vital for the institutions they are affiliated with. The students want a decent environment on campus for studying, eating, resting with security and safety. The students need basic state of art facilities like libraries, smartboards, labs, etc. They also require good food, internship opportunities and updated curriculum etc. By thoroughly assessing these elements, educational institutions can better understand student contentment. Utilizing tools like surveys, group discussions, and final interviews, colleges can pinpoint their strong points and the areas that need improvement. This information can guide them in making specific enhancements, resulting in a more rewarding and fulfilling learning journey for students. Increased satisfaction and involvement will allow the students to interact better, perform better and finally get paid better. This means that by ensuring student satisfaction, they potentially

create the last push that can let students become better. This can help increase the reputation of the institution/college, therefore causing it to attract more and dedicated students and secure better institutional ranking.

2. LITERATURE REVIEW

Works of Oldfield & Baron (2000), Gruber, et.al. (2010), Bowden (2011) and Kakar, et.al. (2023) report the increasing competition in the higher education industry and the growing perspective of viewing students as clients. These clearly point to the need for measuring satisfaction level of students just the way marketers measure customer satisfaction. In general, gaining information on the satisfaction level of students at a university holds tremendous importance for several stakeholders. The various dimensions, of ‘what is the experience at the University?’ as perceived by students, can be useful inputs to developing a long-term strategy that targets sustenance and growth of the University in the higher education industry. Student satisfaction surveys, attempting to gauge quality dimensions of higher education institutions have been common in several countries of Asia, Europe, and the US. Leckey and Neill (2001) point to the major role of ‘student feedback’ in delivering quality in higher education institutions and very similarly in Indian context, the National Assessment and Accreditation Council (NAAC) proposes the conduct of a Student Satisfaction Survey with reference to the teaching-learning and evaluation with the intention to ensure high quality of higher education in all disciplines. Some prominent studies that have thrown light and enabled the researchers identify the variables for setting the research framework have been tabulated below;

Table 1: Review of Literature

S. No	Author(s)	Title	Methodology	Findings
1	O’Brien et al (2007)	A study into the factors influencing the choice-making process of Indian students when selecting an international university for graduate studies using Grounded Theory	Grounded theory approach to quantitative survey and focus group responses for qualitative data	Important variables uncovered - the desire for self-improvement, the desire to increase personal opportunities in the job market, the desire to keep with family tradition and culture and normative referents.
2	Ming (2010)	Institutional Factors Influencing Students’ College Choice Decision in Malaysia: A Conceptual Framework	Development of a conceptual framework to describe the determining and determined variables.	Yielded a conceptual framework wherein students’ choice of college was the dependent variable and college characteristics and marketing efforts of the college were the independent factors
3	Bowden (2011)	Engaging the Student as a Customer: A Relationship Marketing Approach	SEM approach to data obtained from the responses of a survey of 474 students	Psychological factors and attachment to the brand of the university are the most important factors for determining the student loyalty. Also, student satisfaction and trust were not significant.
4	Ogunnaike et al (2014)	Customer Relationship Management Approach and	A multiple regression analysis to explore the relationship between student lifecycle management and	Effective management of student lifecycle, and strong parent relationship management positively

		Student satisfaction in Higher Education Marketing	their willingness to recommend was explored for two Nigerian colleges	influences the willingness of students to endorse their university.
5	Gray & DiLoreto (2016)	The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments	Survey responses were put to mediation analysis to explore the relationship between student learning & satisfaction and course structure, presence of teacher and interaction of students with one another.	Student engagement mediates the relationship of learner interaction and instructor presence on both perceived student learning and student satisfaction.
6	Bueno (2023)	Enhancing Graduate School Experience: A Comprehensive Evaluation of Student Satisfaction with Services and Facilities	Thematic analysis of qualitative data of 20 respondents gathered via surveys and interviews of graduates across various disciplines in Philippines	Student academic performance and success of the school were dependent upon the facilities provided by the graduate school.
7	Furqon et al (2023)	The Impact of Learning Management System (LMS) Usage on Students	Review of existing literature published during the years 2015–2021	Positive impact of LMS on the academic performance, positive perceptions, and satisfaction of the students.

Source: Authors’ Compilation

Studies in Indian context too have been thrown light on the nuances of the determinants of student satisfaction. Region specific research include prominently, Bagalkoti, et al. (2006) for Karnataka, Kaur and Bhalla (2015) for Punjab while discipline specific insightful studies include Vijay (2013) for physical therapy students and Singh & Jaisal (2020) for management institutes in India while the coverage of Kanwar & Sanjeeva (2022) has been higher education institutes in India.

However, the overall student satisfaction in an institute/college, rests on factors other than the very direct - instructor centric learning. For instance, the massive inclusion of technology is creating a greater fascination, use and usefulness of technology-based pedagogies in higher education. Additionally, and specifically in higher education, the prospect of job placement is of high importance for the students.

Thus, the relevance and importance of measuring student satisfaction stands out in the wake of market dynamics of the higher education industry and the increasing importance to the perspective (and therefore attitude) of the student. The satisfaction survey will enable identification of the strong and the not-so-strong areas and a subsequent development of means to turn the later into the former.

3. RESEARCH OBJECTIVES AND SCOPE

The study aims to identify the effect that student relationship management has on the student satisfaction level. The study is confined to the city of Patiala, in the state of Punjab, a north Indian state and the students who have been the subject of study were amongst those pursuing undergraduate studies in computer science institutes operating in private sector (as against State run or Government Universities/colleges or their affiliates).

Based on the existing literature reviewed by the researchers, four independent variables were identified, viz. infrastructure, technology, curriculum, and placement. These four have been considered to reflect the most prominent dimensions of student relationship management. Thus, their effect on student satisfaction is the focus of this study.

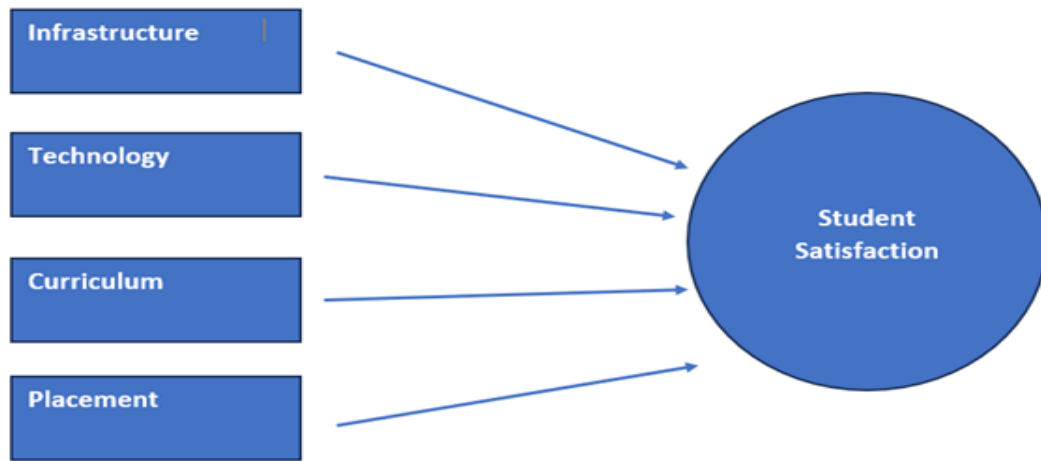


Figure 1: Variables of the Study

3.1 Research Methodology

Descriptive study based on contemporaneity investigation through a structured questionnaire forms the broad research design. The questionnaire was utilized in-person across various graduate colleges in Patiala, Punjab offering educational programs in computer sciences. The respondents were undergraduate students belonging to age groups 17-24 and the survey questionnaire was filled by 132 such students. After filtering the fully completed questionnaires, 118 forms were selected for statistical application and subsequent data interpretation. The demographic sought in the questionnaire was the age of the respondent in addition to the name and email. Two psychographic questions related to course and year (current affiliation) of the student and there were six questions related to infrastructure, four linked to technology, four associated to curriculum and five connected to placement. Further four questions were also asked to measure the dependent variable, viz. student satisfaction. Microsoft Excel was used for data entry and as the first step, frequencies for the age variable were generated followed by the reliability analysis. Thereafter, correlation and regression analysis were done using IBM SPSS.

3.2 Data Analysis and Interpretation

The following results and interpretations have been obtained from the responses of the survey, as outlined above.

Table 2: Demographics

Variable	Categories	Numbers	Percentage
Age	Below 20	83	70.3
	21 and above	35	29.7
Course/stream	Computers	73	61.9
	Others	45	38.1
Year (of the course)	1 st	42	35.6
	2 nd	21	17.8
	3 rd	46	39.0
	4 th	9	7.6

The above table shows that maximum percentage of respondents were below 20 years, were related to computer arena and were in their first or third year of education.

To find out the reliability of the scales used in the study, Cronbach’s Alpha was calculated.

Table 3: Reliability Statistics

Cronbach's Alpha	N of Items
.936	19

Cronbach’s Alpha’s value is above .90, depicting that the scales used in the paper were reliable. To obtain further inferences, correlation and regression has been done.

Table 4: Correlations
Correlations

		Infrastructure	Technology	Curriculum	Placement
Infrastructure	Pearson Correlation	1	.572**	.589**	.600**
	Sig. (2-tailed)		.000	.000	.000
	N	118	118	118	118
Technology	Pearson Correlation	.572**	1	.646**	.535**
	Sig. (2-tailed)	.000		.000	.000
	N	118	118	118	118
Curriculum	Pearson Correlation	.589**	.646**	1	.708**
	Sig. (2-tailed)	.000	.000		.000
	N	118	118	118	118
Placement	Pearson Correlation	.600**	.535**	.708**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	118	118	118	118

** Correlation is significant at the 0.01 level (2-tailed).

The correlation table suggests a positive correlation between various independent variables. Further, it can also be seen that these correlations are significant at 0.01 level.

Table 5: Regression Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720 ^a	.518	.501	.69958

a. Predictors: (Constant), Placement, Technology, Infrastructure, Curriculum

The above table suggests that around 50% of the variation in the dependent variable- student satisfaction is caused by the predictors chosen. Moreover, the ANOVA table given below clearly depicts that the model is significant.

Table 6: ANOVA

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	59.478	4	14.870	30.382	.000 ^b
	Residual	55.304	113	.489		
	Total	114.782	117			

a. Dependent Variable: Student Satisfaction

b. Predictors: (Constant), Placement, Technology, infrastructure, Curriculum

Table 7: Coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.186	.316		.590	.556
1 Infrastructure	.281	.114	.220	2.471	.015
Technology	.200	.088	.204	2.264	.025
Curriculum	.125	.098	.133	1.275	.205
Placement	.318	.104	.299	3.054	.003

a. Dependent Variable: Student Satisfaction

As seen from the above table, the significance value of infrastructure, technology and placement lies below 0.05 implying that these variables significantly affect student satisfaction. However, Curriculum followed at various institutes was not found to be statistically influential to the dependent variable-satisfaction.

4. CONCLUSION

The research devised, through literature review, a reliable model of student satisfaction and the things it depends upon. The conceptualized model aided in the creation of a questionnaire utilized to do a survey and obtain firsthand information about student's perception about their college. Via regression analysis, the model was verified and found to be statistically significant. 50% of the variation in dependent variable was found to be caused by the independent variables formulated in the research.

According to Bueno 2023, survey and interview of the graduate schoolers revealed that the satisfaction of students with their institution's facilities influenced their performance. Infrastructural facilities of their college campus were found to have an impact on student satisfaction in ASEAN context (Nguyen & Tran, 2018). Infrastructure and learning could also influence the student loyalty along with their satisfaction (Mbani et al, 2023). The influence of infrastructure and physical facilities like libraries, sports infra, healthcare, canteen, and labs/classrooms etc on student satisfaction was reemphasised through the results of this paper.

Another factor, technology and its applications as web kiosks, smartboards, LMS, use of SMS/WhatsApp etc were also found to be significant influencers to student satisfaction. Inbuilt features and utility of LMS were found to positively impact student satisfaction (Felisiya and Kesavaraj, 2024) and their academic performance (Furqon et al, 2023). Previous studies suggest that text messaging can be used as supportive tool in online courses (Assignon,2018) and can enhance student's learning (Gasaymeh and Aldalalah, 2013). The plethora of benefits that WhatsApp can deliver to the students have also been widely documented (Morsidi et al.,2021; Suárez-Lantarón et al, 2022). Placement support, services, and its characteristics were found to be significant influencers to student satisfaction. literature suggests that the placement and career services provided by colleges is one of the main factors that indicate how a college is progressing (Kanwar and Sanjeeva 2022). Thus, most of the findings of the paper found support with previous studies. However, there was a lack of evidence to suggest that curriculum variable was an effective parameter for measuring student satisfaction.

The research has successfully identified important parameters that affect student satisfaction. These factors need to be well acknowledged by college/higher education institutes so as to consistently improve upon them. Also, the parameters that received mixed reviews from the students should not be overlooked. All the effort in this direction will go a long way in contributing to the student confidence which will most likely result in greater student loyalty (and a sense of belongingness) towards the college. The researchers recommend furthering of in-depth research for the identification of more factors and parameters along with precise measurements via personal (qualitative) interviews with respondents to enhance the value addition done by this research.

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