Students' Satisfaction in Higher Education Literature Review

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Abstract Students' satisfaction can be defined as a short-term attitude resulting from an evaluation of students' educational experience, services and facilities. Earlier it was measured by common satisfaction frameworks but later higher education specify satisfaction models were developed. The objective of this review is to render all available constructive literature about students' satisfaction with a sound theoretical and empirical background. Data were collected from refereed journals and conference papers, and are constructively analyzed from different point of views to filter a sound background for future studies. The first section of the paper discuss students' satisfaction, satisfaction models and frameworks used by previous researchers around the world and second section explain the empirical findings of previous studies in real world context.

Keywords: students' satisfaction, university facilities, degree program, university image, higher education

1. Higher Education

Higher education is the education at a college or university level is perceived as one of most important instruments for individual social and economic development of a nation [39]. The primary purpose of higher education are creation of knowledge and dissemination for the development of world through innovation and creativity [21]. As well, Fortino, [23] claimed creation of prepared minds of students as purpose of higher education. Hence, higher education institutions are increasingly recognizing and are placing greater emphasis on meeting the expectations and needs of their customers, that is, the students [16]. So, successful completion and enhancement of students' education are the major reasons for the existence of higher educational institutions. This positive development in higher education shows the importance of educational institutions understanding student satisfaction in a competitive environment [65]. Now the higher education industry is strongly affected by globalization. This has increased the competition among higher education institutions to adopt market-oriented strategies to be differentiate themselves from their competitors to attract as many students as possible satisfying current students' needs and expectation. Therefore, numerous studies have been conducted to identify the factors influencing student satisfaction in higher education.

2. Satisfaction

Satisfaction is a feeling of happiness that obtain when a person fulfilled his or her needs and desires [55]. It is a state felt by a person who has experienced performance or an outcome that fulfilled his or her expectations [27]. Accordingly, satisfaction can be defined as an experience of fulfillments of an expected outcomes Hon, [26]. Person will satisfy when he /she achieves the expectations, hence it is a willful accomplishment which result in one's contentment [51]. Satisfaction refers to the feeling of pleasure or disappointment resulting from comparing perceived performance in relation to the expectation Kotler & Keller, [32]. Customers will satisfy when services fit with their expectation [48]. Hence, it is a function of relative level of expectation connecting with people's perception [39]. When a person perceives that service encountered as good, he would satisfy on the other hand person will dissatisfy when his or her perception crash with the service expectation. Therefore, satisfaction is a perception of pleasurable fulfilment of a service [42].

3. Student Satisfaction

Students' satisfaction as a short term attitude, resulting from an evaluation of a students' educational experiences [19]. It is a positive antecedent of student loyalty [41] and is the result and outcome of an educational system (Zeithaml, 1988). Again Elliot & Shin [20] define student satisfaction as students' disposition by subjective evaluation of educational outcomes and experience. Therefore, student satisfaction can be defined as a function of relative level of experiences and perceived performance about educational service [39] during the study period, Carey, et al [10]. By considering all, students' satisfaction can be

defined as a short-term attitude resulting from an evaluation of students' educational experience, services and facilities.

3.1. Dimensions of Student Satisfaction

Students' satisfaction is a multidimensional process which is influenced by different factors. According to Walker-Marshall & Hudson (1999) Grate Point Average (GPA) is the most influential factor on student satisfaction. Marzo-Navarro, et al. [36], Appleton-Knapp & Krentler [9] identified two groups of influences on student satisfaction in higher education as personal and institutional factors. Personal factors cover age, gender, employment, preferred learning style, student's GPA and institutional factors cover quality of instructions, promptness of the instructor's feedback, clarity of expectation, teaching style. Wilkins & Balakrishnan [64] identified quality of lecturers, quality of physical facilities and effective use of technology as key determinant factors of student satisfaction. As well as, student satisfaction in universities is greatly influenced by quality of class room, quality of feedback, lecturer-student relationship, interaction with fellow students, course content, available learning equipment, library facilities and learning materials [24,33,60]. In addition to 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 have been identified as major determinants of student satisfaction in higher education [17,45].

3.2. Student Satisfaction Models

This section presents few models and frameworks applied by researchers to uplift students' satisfactions in higher education literature. The models and frameworks have been arranged on chronological order of years to identify how focus has changed from past to now.

SERVQUAL is a most popular widely used service quality model which has been applying to measure students' satisfaction around the world. SERVQUAL is a questionnaire that has been designed, developed and tested in business environment, by Parasuman in 1985 to measure service quality and customer satisfaction of a business taking five dimensions into consideration as tangibility, reliability, empathy, responsiveness and assurance [63]. That questionnaire was administrated by twice, one to measure customer expectation and next to gain customer perception [63]. Though it is widely applied in industry, is much criticized in higher education literature by scholars like; Teas (1992), Buttle (1996), Asubonteng, et al (1996), Pariseau & McDaniel (1997), Aldridge & Rowley (1998), Waugh, [63]. Being a government university in a non-profit service industry, it is difficult to apply business focused service quality model to measure student's satisfaction as it is. For an example, the model more focuses on service providers' quality than tangibility. In a university environment, student satisfaction is determined by multiple factors in which quality of service providers is a small part.

The investment theory of students' satisfaction of Hatcher, Prus, Kryter and Fitzgerald illustrated the behavior of students' satisfaction with academic performance from investment point of view. According to the theory, student perceives their time, energy and effort as investment and seek a return form that. Accordingly, students will satisfy if they are rewarded in relation to the investment they made [12]. The SERVQUAL measures students' satisfaction from organizational point of views but the satisfaction of student is influenced by students' side also such as their dedication, perception, results, attitudes…etc. The gap was filled by Noel-Levitz in 1994 developing "Noel-Levitz Student Satisfaction Index" for higher education which covers faculty services, academic experience, student support facilities, campus life and social integration. Later, Keaveney and Young (1997) introduced Keaveney and Young's satisfaction model for higher education. It measures the impact of college experience on students' satisfaction along faculty services, advising staff and class type considering experience as a mediating variable. But the model is too narrowed into few variables and largely ignored university facilities, lectures, non-academic staffs and services in assessing satisfaction. Going beyond mediating models, Dollard, Cotton and de Jongein introduced "Happy - Productive Theory" in 2002 with a moderating variable. According to the model students' satisfaction is moderated by students' distress. Consequently, student satisfaction goes up when distress is low and satisfaction goes down when distress is high. The models were too narrowed into small part of satisfaction.

Elliot & Shin developed more comprehensive student satisfaction inventory in 2002 covering 11 dimensions and 116 indicators to measure the satisfactions of students in higher education industry. The dimensions were academic advising effectiveness, campus climate, campus life, campus support services, concern for individual, instructional effectiveness, recruitment and effectiveness of financial aids, registration effectiveness, campus safety and security, service excellence and student centeredness. This index covers all services provided by academic and non-academic staff to students as well has touched physical facilities and other related services being affected to students in a university environment. Similarly, Douglas, et al developed "Service Product Bundle" method in 2006 to investigate influences on student's satisfaction in higher education, taking 12 dimensions in to consideration which were professional and comfortable environment, student assessments and learning experiences, classroom environment, lecture and tutorial facilitating goods, textbooks and tuition fees, student support facilities, business procedures, relationship with teaching staff, knowledgeable and responsiveness of faculty, staff helpfulness, feedback and class sizes. The dimensions were arranged under four variables; physical goods, facilitating goods, implicit services and explicit service. Unlike the SERVQUAL, Service Product Bundle method provides a more comprehensive range of variables that influence student satisfaction in higher education.

Jurkowitsch, et al. [28] developed a framework to assess students' satisfaction and its impact, in higher education. In this framework service performance,

university performance, relationships with student, university standing works as antecedents of satisfaction and promotion works the successor. Later, Alves and Raposo developed a conceptual model to assess students' satisfaction in 2010. According to the model student's satisfaction in higher education is determined by institute's image, student expectations, perceived technical quality, functional quality and perceived value. These influences can be identified directly or indirectly through other variables. The model further illustrated student loyalty and word of mouth as the main successors of satisfaction. When student satisfaction upsurge, he will psychologically bound with university and its activities. That represent level of loyalty he or she has. Consequences will be spread among friends, relatives, prospect students and interested parties then and there as word of mouth. The main criticism for the model is that it has largely ignored main functions of a university; teaching and learning in measuring satisfaction of students but it has been developed adding two successors of satisfaction as loyalty and world of mouth.

Moving from conventional satisfaction models, student's satisfaction are now measured by hybrid models. Shuxin, et al. [58] developed a conseptual model integrating two mainstream analysis: factor analysis and path analysis. Direct path of the model explains the impact of perceived quality on student loyalty and indirect path describes the impact of perceived quality and student expectation on loyalty through student satisfaction. Recently, Hanssen & Solvoll [25] develop a conceptual model combining satisfaction model and facility model. The satisfaction model was developed to explain how different factors influence on students' overall satisfaction and facility model was developed to explain influence of university facilities on student overall satisfaction. According to the model, student satisfaction work as dependent variable of overall model and host city, job prospects, costs of studying, reputation, physical facility are working as independent variables of the satisfaction model. Facility model of the framework, is used to identify the facilities at institute that are most influential in formation of student overall satisfaction, therefore dependent variable (university facility) of facility model is used as one of explanatory variables in satisfaction model. The model has more focus on university facilities and little attention was paid into teaching, learning and administrative process of institutes but it revealed a new path for scholars precisely combing two separate models for satisfaction literature.

Different scholars have used different models to assess students' satisfaction in higher education and every model is more or less criticized by scholars. As a result, old models have been gradually developed with new insight. Following table summarized the satisfaction models developed by various scholars to measure student satisfaction in higher education.

According to Table 1, it seems that various scholars have been taking tremendous efforts to satisfy students in higher education touching different areas of satisfaction using various frameworks and models throughout last few decades. At the beginning, researchers have applied industry satisfaction models and later developed higher education based models to measure the satisfaction. The models have been developed using different dimensions into consideration and been applied in different geographical areas at different times. As a result, same dimensions have shown contradictory relationships with students' satisfaction at different situations and different dimension have shown similar behaviors with students' satisfaction around the world. These contrasts have been empirically tested by following scholars through their studies.

Table 1. Students' Satisfaction Models

No	Author	Year	Model
01	Pascarella,Tetenzini	1983	Student Satisfaction Model
02	Parasuraman, A; Berry, L; Zeithaml, V	1985	SERQUAL Model
03	Hatcher, Prus, Kryter and Fitzgerald	1992	Investment Theory
04	Noel-Levtiz	1994	Noel-Levtiz Student Satisfaction Index
05	Dollard, Cotton and de Jonge	2002	Happy Productive Theory
06	Elliot, K.M; Shin, D	2002	Student Satisfaction Model
07	Keaveney and Young's	1997	Satisfaction Model
08	Abdullah, F.	2005	HEdPERF (Higher Education Performance)
09	Douglas, Jacqueline; Douglas, Alex; Barnes, Barry	2006	Service Product Bundle Method
10	Jurkowitsch, Silke; Vignali, Claudio; Kaufmann, Hans-Rudiger	2006	Student Satisfaction Model
11	Alves, Helena; Raposo, Mario	2010	Conceptual model for satisfaction
12	Shuxin, Guo; Fei, Teng; Jiannan, Guo; Yang, Sun	2014	Satisfaction Evaluation Model
13	Thor-Erik Sandberg Hanssen and GisleSolvoll	2015	Satisfaction Framework

Table 2. Summery of Satisfaction Models

Author and Year	Study	Variables
Elliot, K.M. Healy, M.A. 2001	Key factors influencing student satisfaction related to recruitment and retention	Academic advising, Effectiveness, Campus climate, Campus life Campus support services, Concern for the individual, Instructional effectiveness, Recruitment and financial aid effectiveness, Registration effectiveness, Campus safety and security, Service excellence, Student centeredness
Mercedes M. Navarro Marta P. Iglesias Pilar R. Torres 2005	A new management element for universities: satisfaction with the offered courses	Teaching Staff, Teaching Method, Administration, Enrolment, Infrastructures
Oscar W. DeS. Jr Ali Kara ErdenerKaynak 2005	Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory	Faculty, Advising Staff, Classes, student college experience
Jacqueline Douglas Alex Douglas Barry Barnes 2006	Measuring Student Satisfaction at UK universities	Professional Environment, Student assessment and Learning experiences, Classroom environment, Lecture and tutorial facilitating goods, Textbooks and tuition fees, Student support facilities, Business procedures, Relationship with the teaching staff, Knowledgeable and responsive faculty, Staff helpfulness, Feedback, Class sizes
Ramzi N. Nasser BecharaKhoury Kamal Abouchedid 2006	University students' knowledge of services and programs in relation to satisfaction	Academic experience, Academic advisor, Campus life, Personal development opportunities, Resources and student services.
Qinggang Wang Ross Taplin Alistair M. Brown 2011	Chinese students' satisfaction of the study abroad experience	Preparation, Culture, Technical Teaching
Pathmini MGS Wijewardhena WP Gamage CT Gamini LPS 2012	Impact of Service Quality on Students' Satisfaction in Newly Established Public Sector Universities in Sri Lanka:	Tangibility, Competence Empathy, Curriculum, Delivery, Reliability
S. Farahmandian, H. Minavand, M. Afshardost 2013	Perceived service quality and student satisfaction in higher education	Student advising, Curriculum , Teaching quality, Financial assistance, Tuition costs, Facilities
Stephen Wilkins Melodena Stephens Balakrishnan 2013	Assessing student satisfaction in transnational higher education	Lecturers, Program, Assessment and Feedback, Resources, Technology, Facilities and Social Life.
MazirahYusoff Fraser McLeay Helen Woodruffe- Burton 2015	Dimensions driving business student satisfaction in higher education	Professional and comfortable environment, Student assessments and learning experiences, Classroom environment, Lecture and tutorial facilitating goods, Textbooks and tuition fees, Student support facilities, Business procedures, Relationship with teaching staff, Knowledgeable and responsive faculty, Staff helpfulness, Feedback, Class sizes
Thor-Erik Sandberg Hanssen G. Solvoll 2015	The importance of university facilities for student satisfaction at a Norwegian University	University facilities, Location ,Job prospects, Costs of studying, Reputation
Sami KarnaPaiviJulin 2015	A framework for measuring student and staff satisfaction with university campus facilities	Workspace facilities, Laboratory facilities, Teaching facilities, General purpose facilities, Facility maintenance, Campus accessibility and movement, Outdoor areas
MazirahYusoff Fraser McLeay Helen Woodruffe-Burton 2015	Dimensions driving business student satisfaction in higher education	Professional Environment, Student assessment and Learning experiences, Classroom environment, Lecture and tutorial facilitating goods, Textbooks and tuition fees, Student support facilities, Business procedures, Relationship with the teaching staff, Knowledgeable and responsive faculty, Staff helpfulness, Feedback, Class sizes
Nara Martirosyan 2015	An examination of factors contributing to student satisfaction in Armenian higher education	Faculty services, Academic experience Student support facilities Campus life Social integration

4. Empirical Research Findings

A study conducted by Garcl a-Aracil [24] in eleven European Countries, found that student satisfaction across different European Countries was relatively stable despite the differences in education systems. The study further realized that contacts with fellow students, course content, learning equipment, stocking of libraries, teaching quality and teaching/learning materials have significant influence on the students' satisfaction. Wilkins & Balakrishnan [64] founnd that quality of lecturers, quality and availability of resources and effective use of technology have significant influence on students' satisfaction in transnational higher education in United Arab Emirates. The study further revealed that there are significant differences of satisfactions at undergraduate and postgraduate levels. Karna & Julin [30] conducted a study on staff and students' satisfaction about university facilities in Finland. The study found that core university activities, such as research and teaching facilities, have greater impacts on overall students' and staff satisfaction than supportive facilities. Further, study found that both academic and students perceive physical facilities are more important than general infrastructures in which library facilities are the best explanatory factor of overall satisfaction. In addition, study indicated that students satisfied with factors related to comfortable learning environment, public spaces, campus accessibility and staff satisfied with laboratory and teaching facilities. Finally, overall results indicated that the factors related to the research and teaching activities have the greatest impacts on the overall satisfaction of both groups in Finland.

Douglas [17] measured students' satisfaction at Faculty of Business and Law, Liverpool John Moores University Malaysia. The study found that physical facilities of university are not significantly important with regards to students' satisfaction but it works as key determinant of students' choice in selecting universities. Yusoff et al, [65] identified12 underlying variables that significantly influence students' satisfaction in Malaysian higher education setting. Accordingly, professional comfortable environment, student assessment and learning experiences, classroom environment, lecture and tutorial facilitating goods, textbooks and tuition fees, student support facilities, business procedures, relationship with the teaching staff, knowledgeable and responsive faculty, staff helpfulness, feedback, and class sizes make significant impact on students' satisfaction. The study further identified that year of study, program of study and semester grade have significant impact on student support facilities and class sizes. Martirosyan [35] examined the impact of selected variables on students' satisfaction in Armenia. Light of the study identified reasonable curriculum and faculty services as key determinants of student satisfaction. As well, study found negative relationships of faculty teaching styles and graduate teaching assistants with students' satisfaction. The study also examined the effects of demographic variables on students' satisfaction. Out of the several variables associated with student satisfaction, type of institution effect on students' satisfaction significantly in which students from private institutions reported a significantly higher satisfaction level than their peers at public institutions. Andrea and Benjamin [8], examined students' satisfaction with university location based on Dunedin city, New Zealand. The study indicated that students at the University of Otago perceive accommodation, socializing, sense of community, safety and cultural scene as most important attributes of university location. The study further identified shopping and dining, appeal and vibrancy, socializing and sense of community and public transport as key drivers of overall satisfaction with the university location. DeShields Jr. in 2005 to investigate the factors contributing to student satisfaction and retention based on Herzberg's two-factor theory. It found that student who have positive college experience are more satisfy with the university than that of students who haven't experiences.

Kanan & Baker [29] attempted to examine the efficacy of academic educational programs based on Palestinian developing universities. The study found that academic programs make significantly impact on students' satisfaction. Navarro [41] examined the impact of degree program on students' satisfaction in Spanish University System. The result indicated that teaching staff, teaching methods and course administration have significant effect on students' satisfaction in Spanish University System. Palacio, et al., [44] investigated the impact of university image on students' satisfaction. The study found that university image of Spanish University System make a significant impact on students' satisfaction. Malik, et al. [34] explored the impact of service quality on students' satisfaction in higher education and it was found that cooperation, kindness of administrative staff, responsiveness of the educational system play a vital role in determining students' satisfaction. Pathmini, et al [49] identified reliability, curriculum and empathy as major determinant factor of student satisfaction in regional state universities. The findings further accentuated that administrators of regional universities should focus their attention more on these three factors other than tangibility, competence and delivery. Farahmandian, et al. [22] investigated the levels of students' satisfaction and service quality of International Business School, University Teknologi Malaysia. According to the findings, academic advising, curriculum, teaching quality, financial assistance, tuition fee and university facilities have significant impact on students' satisfaction. Khan [31] discussed the impact of service quality on levels of students' satisfaction at Heailey College of Commerce, Pakistan. The findings indicated that except tangibility, other dimension of service quality have a significant impact on students' satisfaction. It means that students don't rate institute on the basis of building and physical appearance but on quality of education. Study further explored that students willing to put extra efforts on education when the level of satisfaction is high.

Alvis and Rapaso [6], investigated the influence of university image on student satisfaction and loyalty in Portugal. The findings of the study indicated that university image has both direct and indirect effect on student satisfaction and loyalty. Nasser et al [40] investigated university student knowledge about services and program in relation to their satisfaction at Lebanese Catholic College. The study found that student those who

have high knowledge on university procedure, rules and regulation, may hold greater educational value and thus have greater satisfaction levels. Hanssen & Solvoll, [25] identified that reputation of the institution, attractiveness of host university city and quality of facilities have strong influencing powers on students' satisfaction however job prospects failed to influence significantly on the satisfaction in Norwegian university system. Study further identified that social areas, auditoriums and libraries are the physical factors that most strongly influence on students satisfaction. Ali, et al., [4] found academic aspect, non-academic aspect, and access, reputation, and program issues as greater influencing factors of students' satisfaction.

With the development of higher education in the world, the importance of students' satisfaction was emerged in the literature of higher education. At the beginning, industry based satisfaction models were applied to explain student satisfaction and later developed higher education based models to explain it. The paper was discussed the theoretical and empirical literature of higher education with the intension of enhancing existing stock of knowledge. The theoretical review proved that satisfaction is a psychological process and is affected by many factors in different settings.

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