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Research Paper

Construction and Standardization of Students Satisfaction Scale in Economics

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ABSTRACT

This paper highlights the process of construction and standardization of students satisfaction scale in economics for school students. According to Markham and Hagan (2001), student satisfaction is the result of expectations and experiences related to the subject and/or course. As stated by Astin (1993), a student's opinion of their time in college and the value they place on their education can also be used to define student satisfaction. It describes the spectrum of emotions that a learner may have on their successes and educational experiences, from happy to unhappy. The scale initially consisted of 45 items after review and evaluation by subject experts, which were reduced to 38 in the first try out and then finally to 30 items in the final draft after the item analysis. The test-retest reliability of the test was computed to be 0.76. Content validity was calculated and the scale was found to be valid.

Keywords: *Construction and Standardization, Students Satisfaction Scale*

Satisfaction is the feeling of contentment and gratification that arises when needs or desires have been fulfilled. Satisfaction also can be understood as a positive psychological state and response to the results of an evaluation process (Giese & Cote, 2000). Satisfaction is a feeling of happiness that obtain when a person fulfilled his or her needs and desires (Saif, 2014). 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 fulfillment of a service (Oliver, 1997).

A learner's emotions influence every aspect of his academic experience. If the course work is right for him, he will be happy with his accomplishments and eager to tackle the interesting assignments that are ahead. However, even at the best schools, there will inevitably be annoyances and irritations. Additionally, certain aspects of the school programs may cause fear, particularly if they put the learner in danger of failing. William (1959) highlighted that every girl and boy want to be a unique personality with a fit body, developing intelligence, more emotional composure, higher social group participation, etc. According to Taylor (1986), every individual is always evolving into something slightly different from which they are right now. The entire pattern is evolving; therefore it's critical

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to acknowledge both the pattern's existence and its change at the same time. Butler (1963) provided support for the aforementioned statement by stating that kids may succeed academically and gain positive school experience when teachers know the concept of learning styles and apply it to their interactions with students.

An important quality indicator for education institutions is students' satisfaction. It assesses students' experience with an institution as a whole and how much they enjoy classes. Basically, as an indicator, it refers to the quality of students' experience with an institution. They can be satisfied or dissatisfied depending on their levels of happiness or disappointment with an institution, and this reflects directly on a brand's image. Just like in most companies, where customer satisfaction is especially important, education institutions have to create strategies to increase students' satisfaction and, consequently, loyalty rates. In educational context, it includes providing good classes, having a qualified faculty, modern infrastructure, and a constant focus on innovation.

Institutions of higher learning are starting to resemble businesses. Satisfying admitted students is crucial for retention, much like it is for profit-making institutions trying to keep their clients. One could argue that unhappy students would enroll in fewer classes or decide to left college altogether. Therefore, it become essential to research and properly manage the relationship between student satisfaction, intention, and retention in higher education (Kara & De-Shields, 2004). People's awareness of the significance of quality issues in the delivery of research programs, education, and services is growing. This is because more students are enrolling in educational programs and because government financing is becoming more closely linked to evaluations of the caliber of research and teaching initiatives at educational institutions (Shago, 2005). At universities, recruiting new students has long been a key component of their operations. However, the quick growth of higher educational intuitions, the sharp rise in the sphere of college education, and changes in the population's demographics may require institutions to reconsider how important students' satisfaction is to their continued existence.

On students' part, students' satisfaction is a subjective perception of how well a learning environment supports academic success. The challenging instructional methods are serving to trigger students' thinking and learning that lead to strong students' satisfaction. The roles of the instructor and of the students are important elements in students' satisfaction and these elements are of prime focus in student learning (Winberg & Hedman, 2008).

The student considered to be dynamic and sees them as both consumers and products in different ways. When looking at their satisfaction from the point of view of marketing, in this era of cutthroat competition, there is a need to assess it. According to Hunt (1977), "satisfaction is a consumer's post purchase evaluation of the overall service experience, be it the process or outcome." Zeithaml, Parasuraman and Berry (1990) defined satisfaction as, "an overall judgment, perception or attitude on the superiority of service. The judgment is based on the discrepancy between expectations and actual experiences of customer." This means that satisfaction is considered to be an emotional state of feeling in which the consumer's needs and expectations for a service experience have been fulfilled or exceed them. Oliver (1980), considered satisfaction to be a post decision assessment judgment in the context of an individual purchasing decision, which could be assessed by means of equation: satisfaction equals perception of performance expectations. According to Giese and Cote (2000), satisfaction is a summary, emotional and variable intensity response based on specific aspects of acquisition or consumption that occur at the precise moment when an

individual evaluates the objectives. To be precise, the satisfaction expressed as a summary psychological state based on customer experience compared to expectations can therefore be regarded as an objective subjective assessment.

According to Wiers-Jenssen, Stensaker and Grogaard (2002), "Student satisfaction is defined as students' evaluations of the services offered by colleges and universities". Elliott and Shin (2002) claim that because of recurrent encounters, student happiness is a constantly shifting construct in area of higher education. It is a flexible process that calls for precise and efficient action when an organization pays attention to what its students have to say. According to Thomas and Galambos (2004), "Students' satisfaction is a complicated construct that is influenced by a range of student and institutional variables." Elliott and Healy (2001), state that a short-term mindset that emerges from an assessment of students' educational experiences is student satisfaction. Guolla (1999) says that poor classroom facilities, of which an instructor may have limited resources to change, may influence a student's satisfaction. Accordingly the campus environment can be viewed as a network of interconnected events that affect how satisfied students are (Elliott & Shin 2002). A greater amount of pleasure can be attained with the use of both in-person and online collaborative learning strategies.

Students' satisfaction is a key indicator in assessing e-learning effectiveness. The studies report that students who participated in online collaborative tasks expressed higher levels of satisfaction with their learning process compared to students who did not participate in online collaborative learning (Jung, Choi, Lim & Leem, 2002). Bangert (2006) identified four factors related to students' satisfaction in online courses, including student and faculty interaction and communication, amount of time on task, active and engaged learning, and cooperation among classmates.

Process of Construction of Students Satisfaction Scale in Economics

The process of construction of students satisfaction scale in economics in three stages such as: (i) planning phase (ii) construction phase (iii) standardization phase. The description of these phases is given below:

(i) *Planning Phase:* The literature was examined by the researcher from a range of sources, including books, journals, newspapers, government sources, and websites. In light of the operational definition of student satisfaction in economics, which is as follows, the current test was created to gauge student satisfaction in the subject i.e. Students' evaluations of the services offered by colleges and universities indicate their level of satisfaction. Elliott and Shin (2002), claim that because of frequent contacts, the concept of student happiness in the context of higher education is always evolving. It is a dynamic process that calls for precise and efficient action when an organization pays attention to what its pupils have to say. According to Thomas and Galambos (2004) student satisfaction is a complex construct influenced by a variety of characteristics of students and institutions. Five response categories are provided for responding to each item. These response categories are: (i) Strongly Agree (ii) Agree (iii) Undecided, (iv) Disagree and (v) Strongly Disagree.

(ii) *Construction Phase:* With the assistance of seasoned colleagues, school principals, economists, and students, different statements were formulated according to the body of material that was accessible on students' satisfaction. Three phases were completed by the building phase of the economics students' satisfaction test, including (i) First draft of students satisfaction scale in economics (ii) Second draft of students satisfaction scale in economics (iii) Final draft of students satisfaction

scale in economics. After careful exploration of literature, a pool of 45 items on different dimensions were written and edited. The following points were kept in mind while writing the items such as (a) Items were related to area of investigation (b) Items were comprehensive to the respondent (c) The language of the items was such that the respondents can immediately identify with the situation expressed in the item (d) Those items were avoided that could be interpreted in more than one way or about which contradictions could arise (e) The number of items selected was greater than to be retained in the scale.

(iii) *Standardization Phase*: The standardization phase of students satisfaction scale in economics passed through three stages such as: (a) First draft of students satisfaction scale in economics (b) Second draft of students satisfaction scale in economics and (c) Final draft of students satisfaction scale in economics

First Draft of Students Satisfaction Scale in Economics

The 45 items were provisionally framed as assertions for the first draft. Experts were provided the first draft of 45 items to assess the items' content, ambiguity, and repetition. This is because editing is a crucial step in the Likert scale building process. Distribution of items for three domains of students satisfaction scale in economics is given in following table:

Table-1: Distribution of items for three domains of students satisfaction scale in economics

Sr. No.	**Domain**	**Items**	**Total**
1.	Cognitive	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.	15
2.	Affective	16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.	16
3.	Behavioral	32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45.	14
	Total		**45**

The table-1 shows the distribution of all the 45 items, 15 items of cognitive domain, 16 items of affective domain and 14 items of behavioral domain for the first draft of students satisfaction scale in economics. The distribution of positive and negative items of the first draft of students satisfaction scale in economics has been given in table 2:

Table-2: Distribution of positive and negative items for the first draft

Statements	**Items**	**Total**
Positive Items (+)	1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15,16,17,18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45.	41
Negative Items (-)	4, 10, 20, 21.	4
Total		**45**

The distribution of all 45 items from the initial draft of the students' satisfaction measure in economics is shown in table-2 and 41 of the items are positive and 04 are negative. For this reason, six subject matter experts with extensive backgrounds in teaching at the school, college, and university levels were contacted.

First Try out and Evaluation: The experts were specifically asked to consider each statement carefully and to provide critical, unbiased feedback on what they observed. The investigator and her supervisor spent multiple sittings deliberating over the opinions of the aforementioned experts on the claims made in relation to the economics students' satisfaction test. Considering their feedback and opinions, eight items were eliminated and some were reworded. The distribution of modified and dropped items of the first draft of students satisfaction scale in economics has been given in table-3:

Table-3: Distribution of modified and dropped items for the second draft

Sr. No.	Form of Response	Item Number	f
1.	Modified Items	9, 20	2
2.	Dropped Items	11, 23, 34, 35, 36, 38, 42.	7

Table-3 demonstrates that of the 45 elements in the initial draft, 8 were removed and 2 were changed and reorganized. These 2 items were updated while keeping consideration in mind. The initial version of the students' satisfaction scale in economics had eight items eliminated. In the end, 38 questions were decided upon for the second iteration of the economics students satisfaction scale.

Second Draft of Students Satisfaction Scale in Economics

The second draft of attitude towards students satisfaction scale in economics consisted of those items which were accepted as such and which were modified or revised taking in consideration the opinions given by the experts. The distribution of positive and negative items for the second draft of students satisfaction scale in economics scale has been given in table-4:

Table-4: Distribution of positive and negative items for the second draft

Statements	Items	Total
Positive Items (+)	1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 16, 17, 18, 19, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38.	34
Negative Items (-)	4, 10, 20, 21.	4
Total		**38**

The above table shows that out of the 38 items, 34 positive and 04 negative items were retained for second draft of students satisfaction scale in economics.

Second Try out and Evaluation

The second draft of students satisfaction scale in economics consisting 38 items was administered to a sample of 50 students of class XI of Ajanta Public School, Amritsar and Khalsa College International Public School, Ranjit Avenue, Amritsar for item validity, so as to remove language difficulty, if any. Item analysis usually provided two kind of information on item such as, item difficulty, which helps us decide if the test items are at the right level for the target group and item discrimination, which allows us to see if the individual items are provided information on candidate's abilities consistent with that provided by other items on the test. The responses of the subjects were scored as per allotted weightage. The weighted score for each item and for each subject were summated. The total scores were used to identify 27% of topics with high scores, or 14 students in the high group, and 27% of subjects with low scores, or 14 students in the low group. They

calculated the weighted scores for each item based on their scored responses. The t-test was utilized for item analysis, with 38 items classified as high and low for each group. The discriminating power of each item was determined by computing the t-ratio for both the higher and lower groups. Therefore, the significance of the difference between the means of the scores of the high and low groups was calculated to determine the item's discriminating power, or how well each statement could distinguish between students with high and low student satisfaction scores in economics based on the value of the t-ratio. For the students' satisfaction measure in economics, items having a t-value of positive and significant at 0.01 levels of significance were chosen. For the scale, items having a positive t-value and significance at the 0.01 level of confidence were chosen. Even at 0.05 levels of significance, the t-ratio for eight items was not significant. The t-ratios of 38 items have been placed in table-5:

Table-5: Distribution of t-ratio of the second draft of students satisfaction scale in economics

Item No.	t-ratio	Item No.	t-ratio
1.	5.31**	20.	1.64
2.	5.26**	21.	7.49**
3.	4.74**	22.	6.53**
4.	5.56**	23.	5.61**
5.	4.98**	24.	1.87
6.	1.86	25.	3.11**
7.	3.08**	26.	6.33**
8.	4.75**	27.	5.82**
9.	1.81	28.	3.35**
10.	4.62**	29.	7.79**
11.	8.05**	30.	5.11**
12.	6.26**	31.	5.38**
13.	4.85**	32.	5.02**
14.	3.80**	33.	0.72
15.	1.92	34.	5.45**
16.	3.28**	35.	4.78**
17.	3.57**	36.	8.04**
18.	0.95	37.	4.62**
19.	1.96	38.	2.99**

*** Significant at 0.01 level*
(Critical Value 2.06 at 0.5 and 2.78 at 0.01 levels, df 26)

Table-5 shows that t-ratio for 8 items such as 6, 9, 15, 19, 20, 21, 24 and 33 were not found significant even at 0.05 levels of significance while 30 items were found significant at 0.01 levels of significance. Hence, out of 38 items, 8 items were dropped and 30 items were retained for the final draft of students satisfaction scale in economics.

Final Draft of Students Satisfaction Scale in Economics

The final draft of students satisfaction scale in economics consisted of 30 items. The distribution of positive and negative items in the final draft of students satisfaction scale in economics has been given in table-6:

Table-6: Distribution of positive and negative items for the final draft

Statements	Item No.	Total
Positive Items (+)	1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30.	28
Negative Items (-)	4, 8.	2
Total		**30**

Table-6 shows that out of a total 38 items, 30 were retained for the final draft of students satisfaction scale in economics. It includes 28 positive and 2 negative items.

Scoring

Each item has a response option on Likert's five points continuum viz., Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with respective weights of 5, 4, 3, 2 and 1 for the positive statements and 1, 2, 3, 4 and 5 for the negative statements. The scoring procedure adopted is presented below in table-7.

Table-7: Scoring Procedure for each item of students satisfaction scale in economics

Items	Scores Assigned				
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Positive Items (+)	5	4	3	2	1
Negative Items (-)	1	2	3	4	5

Table-7 shows that students satisfaction score of the subject is the sum total of item scores of all the statements. The theoretical range of scores on this scale is from 30 to 150. High score on the students satisfaction scale in economics corresponds to high students' satisfaction in economics and vice-versa.

Reliability

The test measures' dependability can be established in a variety of ways. Guilford (1967) proposed a variety of approaches to assess reliability, including test-retest, alternative forms, and internal consistency (or just internal consistency). In order to determine the reliability coefficient, all of these methods use the identical procedure of taking two sets of measures from the same scale and administering them to the same sample. The two halves could not have been similar due to the heterogeneous nature of the scale and the logical arrangement of the elements. Consequently, it was discovered that the test-retest reliability criterion was the most appropriate for assessing the dependability of this scale. The reliability of final draft of students satisfaction scale in economics is 0.76. Thus the final draft of students satisfaction scale in economics is found to be reliable.

Validity

A scale's content validity is ascertained by methodically assessing the test's content to see if it encompasses a representative sample of the behavior that needs to be evaluated. Experts were shown the scale in order to get their opinion on its validity, and only those questions were added that they all agreed upon. In addition, the scale has a fair amount of content validity because the items were chosen after closely examining the concepts of student satisfaction and its numerous facets.

CONCLUSION

Students Satisfaction scale was developed by the investigator to know about the level of satisfaction of students in the subject of Economics. In particular this scale was constructed and standardized for the students of XIth class. During the research investigators felt the need for construction of this test due to the non-availability of students satisfaction scale. Another reason for the construction of this test was the learning environment of students. In keeping mind both the points scale were constructed and standardized by following all the scientific steps of construction and standardization of reliable research tool. The final students satisfaction scale consists of 30 items, 28 items are positive and 2 are negative.

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Conflict of Interest

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