

# **Factors influencing student's overall satisfaction in Course Evaluation Surveys: An exploratory study.**

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**Running Title:** Factors influencing student's overall satisfaction in CES

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## **Factors influencing student's overall satisfaction in Course Evaluation Surveys: An exploratory study.**

### **Abstract**

The purpose of the course evaluation survey (CES) is to obtain student's feedback on various courses offered through a particular program that will help to take appropriate action to improve the quality of teaching and learning process. Accordingly, this study was conducted to determine the relationship between overall satisfaction and the other variables captured through the CES tool using regression models. **Materials and Methods:** The course evaluation survey data (N=3,846) belonging to the College of Nursing of the University of Dammam (UD) which was utilized for studying the relationship between overall satisfaction and a set of explanatory variables such as (i) course specific information available at the start of the course; (ii) Instructor's effectiveness; (iii) Infrastructural facilities available as per the course requirements and; (iv) abilities developed by the students through the course. A stepwise regression model was used to predict the overall satisfaction (dependent) and the other explanatory variables (N=4). **Results:** Among the variables studied, the instructor's effectiveness tend to have a close relationship with the overall satisfaction of the students in CES (coefficient of  $\beta$  is 0.472 and  $p < 0.001$ ). **Conclusion:** It is concluded that the instructor related activities have high impact on students overall satisfaction about the courses belonging to the Nursing program.

**Key words:** Course Evaluation Survey, Students satisfaction, Regression models, Nursing Program

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## **1. INTRODUCTION**

The National Commission for Academic Accreditation and Assessment (NCAAA) has instituted several key performance indicators to measure various attributes of the Quality of Higher Education Institutions (HEI's) in Saudi Arabia (Al-Kuwaiti, 2014). One such approach is the practice of conducting CES which is considered as one of the effective approach to manage the quality of courses offered at the HEIs. The voice of the students captured through CES is important since they are the individuals that are most exposed to and the most affected by the teacher's teaching. Besides its utility to review the curriculum, the results of this evaluation surveys are used by both faculty and the university administrators to enhance the course quality in each program of study. Also, the educational policy planners employ the results of this evaluation to understand the students view in expediting the decision making about the continuous quality improvements in Higher education (Arun Vijay, 2013; Rubaish et al, 2012). Further, in order to understand the complex learning experience gained by the students in a particular course of study, it is essential to understand the factors influencing overall satisfaction of the students in CES.

Several factors have been revealed as predictors of students' evaluation of teaching in higher education. These factors are grouped under three categories viz. students centered, faculty centered and, course centered complexities. The students centered factors includes: (i) Students gender where female students gave higher ratings in general (Badri, Abdulla, Kamali & Dodeen, 2006); (ii) Cultural background of the students (Martin Davies et al, 2007); (iii) Domain specific vocational interest of the students where higher interest in the course was associated with higher evaluation scores (Greimel-Fuhrmann & Geyer, 2003) and; psychosocial dynamics such as Instructors' attractiveness, dress code and perceived personality (Freng & Webber, 2009; Sebastian & Bristow, 2008 and; Clayson & Sheffet, 2006). Similarly, the faculty centered factors that influence the students rating in evaluation surveys are style of managing class, evaluation of student performance, facilitation, teaching style, communication skills and attitude (Deepa S and Manisha Seth, 2014). The course related factors which might influence the students overall satisfaction are: (i) Course grades where there is a significant correlation between anticipated course grades and overall rating of teaching effectiveness (Kidd.N, and Latif.D.A, 2004; Phipps, S.D., Kidd, R.S. and Latif, D.A, 2006; Kozub, R. M. 2010) (ii) Course type and complexities where the instructors who taught demanding courses received evaluations equivalent to university means, whereas the instructors teaching less demanding course received evaluations that were abnormally high (Overbaugh, 1998).

Previous studies also identified several factors that influence the overall satisfaction of students in evaluation surveys (Spoooren, Mortlemans and Denekens, 2007; Ginns, Prosser and Barrie, 2007; Elliot and Shin, 2002). These includes: clarity of objectives, value of subject matter, build-up of subject matter, presentation skills, course organization and materials, course difficulty, help rendered by the faculty, work load, generic skills and, authenticity of examinations. Of these factors, those related to improve the teaching quality are significantly more important that those aimed at improving course contents (Chen and Hoshower, 2003). So it is paramount to isolate and identify the teaching related factors which influence the students' satisfaction during course evaluation surveys since it is mostly reflects the effectiveness of the teaching faculty. Richardson, Slater and Wilson (2007) established a correlation between these factors included as 'individual items' with respect to their 'overall satisfaction' in the students' evaluation surveys. Even though previous studies have established the validity, reliability and usefulness of course evaluation survey instruments, very few studies explored how various factors have influenced the students overall satisfaction in the course evaluation surveys. As a measure to accomplish this objective, the present study was conducted.

## **2. MATERIALS AND METHODS**

**2.1. Study Design:** An exploratory study design was used to understand the factors which influence the students overall satisfaction through course evaluation surveys. Data were collected as part of routine teaching evaluations conducted at the college of nursing of the University of Dammam where all the course evaluation surveys held during the academic year 2011-2012 were included. All the courses included in the undergraduate nursing program were considered and the data consist of 3,846 respondents who were studying those courses during the academic year 2011-12.

**2.2. Data Collection Tool:** The data had been collected using the course evaluation survey questionnaires (N=15 items) which include items on different aspects such as start of the course, its instructor, department, and overall satisfaction with the course quality (Appendix 1). All items in the CES questionnaire are typically "Likert type item", usually having five points (Gravestock. P and Gregor-Greenleaf.E, 2008). These points indicate the degree of agreement with a statement, in ascending order: 1=Strongly Disagree; 2=Disagree; 3= True sometimes; 4=

Agree; 5= Strongly agree. A Likert scale consists of many Likert type items measured on the same number of agreement grades (Grace-Martin. K, 2010). The addition of agreement scores on all such Likert type items in an evaluation questionnaire results in data on a Likert scale, also sometime termed as “summative scale” (Wikipedia, 2014). One must distinguish between “Likert type item” and “Likert scale”, to be more appropriate in analysis and related inferences. This article addresses issues related to only “Likert type item”.

### **2.3.Statistical Analysis**

A stepwise regression model was used to predict the student satisfaction with the various factors of the overall course. The dependent variable was overall satisfaction (i.e., response to the Question. No. 15). The independent variables were four factors included in the Questionnaire such as (i) course specific information available at the start of the course; (ii) Instructor’s effectiveness; (iii) Infrastructural facilities available as per the course requirements and; (iv) abilities developed by the students through the course. Because there was more than one Question in each area, the data was an aggregate for the area. A Stepwise regression model was used on account of this combination. All the analyses were done by using SPSS.19 version. A p-value of less than 0.05 was considered as significant.

## **3. RESULTS AND FINDINGS**

### **3.1.Descriptive Analyses**

All the completed questionnaires (N=3,846) collected during the academic year 2011-2012 were subjected to statistical analysis. Table 1 presents the descriptive statistics for the variables of the course evaluation items. The courses included in the sample had an average enrollment of 84 students and an average response rate was 82%. All the course evaluation items utilized a 5-point response scale, ranging from 5= strongly agree to 1=strongly disagree. The mean score for the overall satisfaction of the course (Question 15) was ‘fairly high’ (Mean=3.52), falling between ‘agree to strongly agree. All other questions on the course evaluation tool were rated by the students as ‘fairly high’ ranging from 3.47 to 3.83.

### 3.2. Multivariate Analyses

The relationship between students overall satisfaction (Q.15) and various four other factors were investigated using the stepwise regression method. Overall satisfaction (Q.15) was used as a dependent variable in the regression analysis.

Using this method, four models were grouped as follows:

- (I) *Factor-2* (i.e. Instructor effectiveness),
- (II) *Factor-2* (i.e. Instructor effectiveness) and *Factor-4* (abilities developed by the Students through the course),
- (III) *Factor-2* (i.e. Instructor effectiveness), *Factor-3* (Infrastructural facilities available) and *Factor-4* (abilities developed by the students through the course)
- (IV) *Factor-1* (course specific information available), *Factor-2* (i.e. Instructor effectiveness), *Factor-3* (Infrastructural facilities available) and *Factor-4* (Abilities developed by the students through the course)

The result in the table 2 and 3 shows that all four models were significant ( $p < 0.001$ ), and each explained more than 50 percent of the variation in the overall satisfaction. At the first step, the obtained regression explained 55.2% of variance in the students overall satisfaction. *Factor 4*, entered at the second step explained a further 6.7% of the variance: *Factor 4*, entered at the third step further 0.5% of variance explained. While all areas entered at the last step explained only 0.3% of the additional variance. All four increments were statistically significant ( $P < 0.001$ ). In the final model, all standardized regression coefficients were statistically significant, suggesting that each of them made a unique contribution to students' experience.

The results in the table 4 show that there is a difference in the impact of all the four factors in the students overall satisfaction. The *factor 2* (i.e. Instructor effectiveness) had the strongest impact on the overall satisfaction ( $\beta_2 = 0.472$ ), while other factors like availability of course specific information (*factor-1*), Infrastructural facilities available (*factor 3*) and, abilities developed by the students through the course (*factor 4*) had little effect on overall satisfaction ( $\beta_4 = 0.345$ ,  $\beta_3 = 0.096$  and  $\beta_1 = 0.108$ )

#### 4. DISCUSSION OF FINDINGS

This study is part of a larger research project that is examining the validity of student evaluations of courses at the University of Dammam. In the process of establishing the validity, it is necessary to investigate the factors which influence the students overall satisfaction during the course evaluation surveys. Thus, this study examined predictors of students' satisfaction at the course level using the existing course evaluation survey (CES) instrument. In order to execute this study, all the course evaluation surveys conducted among the students of the college of Nursing during the academic year 2011-2012 was considered. Accordingly, 3,846 students' responses were included in the analysis.

Overall, the nursing students belonging to UD were satisfied (Mean=3.52) with the quality of various courses offered in their program during the academic year 2011-12.

Further, a step-wise regression model analysis was carried out to study the relationship between students overall satisfaction (Q.15) and other four other factors included in the questionnaire. Four models were designed and all the models were found to be significant ( $p < 0.001$ ). Also, each model explained more than 50 percent of the variation in the overall satisfaction and almost all aspects of students experience uniquely contributed to students' satisfaction with the course quality. This provides evidence that students' satisfaction could be better improved by means of holistic interventions rather than those that address individual factors only. A previous study also indicated that once the students grading on global item (i.e. overall satisfaction) indicated high level of satisfaction, then one can explore the individual items for important clues to attain further improvements (Rubaish *et al.*, 2012). Also, the global item results offer a pragmatic starting point for academic program developers (Sid Nir. C and Bennet. L, 2011; Abrami. P.C, 2001) provided the following two conditions are met viz.

First, the sequencing of items on the questionnaire must be such that responses on individual items precede that on global items. Otherwise, global item results may provide an inaccurate picture, leading to in-appropriate action plans. Secondly, starting corrective actions with global item results is expected to be more useful for institutional environments considered to be in developing phase of their academic programs.

Among all the four factors included in the Questionnaire, the factor 2 (Instructors' effectiveness) is related directly to overall satisfaction, such as faculty availability during office hours, commitment of faculty, method of teaching and so on, were factors that impacted students' satisfaction the most, while the availability of course specific information, department facilities and abilities developed by the students through the course had the least impact on students' overall satisfaction. Thus, the result of this study demonstrated the crucial role of teaching faculty in improving the quality of courses offered at the higher education institutions in Saudi Arabia.

## **5. CONCLUSION**

The study concluded that the factor 2 (Instructor's effectiveness) consisting of seven factors such as the consistency in conducting of the course; availability of the teaching staff during office hours; exhibiting enthusiasm while teaching; regularity in coming to class; utility of up-to-date course materials; encouraging interactive lectures and; inspired to work to the best of the student's ability are more significantly related with Overall satisfaction. Thus, the instructor-related activities are the strongest predictor of the students' overall satisfaction during the course evaluation surveys. This study has provided the basis for future exploration which would be most predictive of overall satisfaction with course quality. Also, these findings add to the body of evidence regarding characteristics associated with students' overall satisfaction with the courses. This study will also help the academic developers in preceding the continuous quality improvements in Higher education.

### **Limitations**

The finding of this study was limited to only one College offering Nursing program. Moreover, other programs offered in other Colleges might be at varying levels of the developmental phase in terms of infrastructure and teaching facilities. So, an appropriate precaution needs to be taken while generalizing the results.

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Table1: Descriptive statistics showing mean score and standard deviation of the variables

Variable. No	No. of Samples	Mean score	Standard deviation
1	3845	3.83	1.092
2	3843	3.64	1.137
3	3843	3.74	1.076
4	3836	3.64	1.150
5	3838	3.71	1.133
6	3844	3.64	1.191
7	3844	3.65	1.134
8	3844	3.64	1.187
9	3839	3.51	1.206
10	3841	3.58	1.163
11	3838	3.57	1.257
12	3711	3.47	1.179
13	3712	3.47	1.160
14	3708	3.50	1.197
15	3687	3.52	1.194

Table 2: Stepwise regression of overall satisfaction (Model summary)

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change statistics				
					R square change	F Change	df1	Df2	Sig. F Change
1	0.743 <sup>a</sup>	0.552	0.552	0.802	0.552	4531.425	1	3683	<0.01
2	0.787 <sup>b</sup>	0.619	0.619	0.739	0.068	656.320	1	3682	
3	0.790 <sup>c</sup>	0.624	0.624	0.734	0.005	44.988	1	3681	
4	0.792 <sup>d</sup>	0.627	0.627	0.731	0.003	33.310	1	3680	

Table-3: Stepwise regression of overall satisfaction (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	2912.795	1	2912.795	4531.425	.000 <sup>a</sup>
	Residual	2367.429	3683	.643		
	Total	5280.224	3684			
2	Regression	3270.950	2	1635.475	2997.013	.000 <sup>b</sup>
	Residual	2009.273	3682	.546		
	Total	5280.224	3684			
3	Regression	3295.210	3	1098.403	2036.874	.000 <sup>c</sup>
	Residual	1985.013	3681	.539		
	Total	5280.224	3684			
4	Regression	3313.016	4	828.254	1549.392	.000 <sup>d</sup>
	Residual	1967.207	3680	.535		
	Total	5280.224	3684			

- a. Predictors: (Constant), factor 2  
b. Predictors: (Constant), factor 2, factor 4  
c. Predictors: (Constant), factor 2, factor 4, factor 3  
d. Predictors: (Constant), factor 2, factor 4, factor 3, factor 1

Table-4: Stepwise regression of overall satisfaction (Coefficients<sup>a</sup>)

Model		Unstandardized Coefficients		Standardized Coefficients (Beta)	t	Sig	Collinearity statistics	
		B	Std. Error				Tolerance	VIF
1	Constant	-0.025	0.054	0.743	-0.457	0.647	1.000	1.000
	Factor 2	0.974	0.014		67.32	0.000		
2	Constant	-0.041	0.050		-0.811	0.417		
	Factor 2	0.616	0.019	0.470	31.944	0.000	0.477	2.096
	Factor 4	0.376	0.015	0.377	25.619	0.000	0.477	2.096
3	Constant	-0.094	0.050		-1.873	0.061		
	Factor 2	0.551	0.021	0.421	25.671	0.000	0.380	2.629
	Factor 4	0.351	0.015	0.353	23.417	0.000	0.450	2.223
	Factor 3	0.108	0.016	0.097	6.707	0.000	0.491	2.037
4	Constant	-0.146	0.051		-2.871	0.004		
	Factor 2	0.472	0.025	0.360	18.508	0.000	0.268	3.730
	Factor 4	0.345	0.015	0.346	23.027	0.000	0.447	2.235
	Factor 3	0.096	0.016	0.086	5.972	0.000	0.483	2.069
	Factor 1	0.108	0.019	0.094	5.771	0.000	0.385	2.596

a. Dependent Variable: Q 15 (Overall satisfaction).

## Appendix-1: Course Evaluation Survey Questionnaire

### *AT THE START OF THE COURSE, THINGS MADE CLEAR TO ME WERE:*

1. The course outline, including the knowledge and skills .....
2. Sources of help for me, including faculty office hours and reference materials .....

### *DURING THIS COURSE, MY INSTRUCTORS:*

3. Conducted the course consistent with the course outline. ....
4. Were available during office hours to help me. ....
5. Were enthusiastic about what they were teaching .....

### *DURING THIS COURSE, MY INSTRUCTORS:*

3. Conducted the course consistent with the course outline. ....
4. Were available during office hours to help me. ....
5. Were enthusiastic about what they were teaching .....
6. Were fully committed to the delivery (e.g. start on time, regular presence, well prepared material, etc.). ....
7. Used up-to-date and useful course materials. (texts, handouts, references, etc.) .....
8. Encouraged me to ask questions, and, develop my own ideas. ....
9. Inspired me to do my best work. ....
10. Made clear to me the links between this and other courses in my program. ....
11. Gave me the marks for continuous assessment on TIME .....

### *DURING THIS COURSE, MY COLLEGE/DEPARTMENT:*

12. Provided the resources I needed (e.g. textbooks, Library) and made them available for me when I needed them .....
13. Provided effective IT (Information Technology) to support my learning. ....

### *THIS COURSE HELPED ME TO:*

14. Improve my ability to think & solve problems rather than memorize facts. ....

### *OVERALL EVALUATION*

15. Overall, I was satisfied with the quality of this course. ....