

## Identification and Prioritization of Effective Services Factors Offered by University for Students' satisfaction, Using Kano's Model: Evidence, Islamic Azad University of Iran, Firoozkuh Branch

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**Abstract.** The purpose of this study is primarily identifying the effective services factors on students satisfaction offered by Islamic Azad University Firoozkuh Branch, secondly classification of these factors and finally determination of the priorities of any mentioned factors in the related category based on Kano's model. This study is a field method in which focus group interview was used resulted exploration of 27 effective factors for students' satisfaction. The questionnaire was designed in 4 parts and distributed among 384 students. The samples were chosen by stratified random sampling method students in levels of associate of arts, B.S, and Ms. Degrees. The gained data of the questionnaires were analyzed in the three stages. First a Binominal test was administered and effectiveness of 27 variables on the student s satisfaction was clarified. On the second stage, based on Kano's model the kind of influence of 27 variables on the student s satisfaction was clarified. On the final stage, Friedman test was administered to identify the priority of the 27 influential variables on student s satisfaction.

**Keywords:** satisfaction, services, Kano's model – must- be requirements, one- dimensional requirements, attractive requirements.

### 1. Introduction

Universities use increasingly, the customer centered services method to meet the student's needs as well as possible. (Bilgili and Unal, 2008). The critical problem of Universities is that they don't know their students needs thoroughly. Identification of the effective factors in making students' satisfaction is necessary and important, and this necessity causes our study to be done to identify the qualitative requirements about students' attitudes on offered services to increase students' satisfaction, then by using this information Universities should reinforce the positive factors and improve the negative factors, in order to maximize students' satisfaction as much as possible.

The purpose of this study is threefold:

- Identifying the effective services factors on students satisfaction offered by Islamic Azad University Firoozkuh Branch
- Classification the effective services factors on students satisfaction offered by Islamic Azad University Firoozkuh Branch, based on Kano model.
- Determination of the priorities of any mentioned factors in the related category based on Kano's model.

By using the collected data of relating to its own organization, this study helps the manager's universities to act more effectively in order to recognize the student's opinion, in order to make a structure for managers, designers and decision makers of the Universities to enable them to improve these services having more influence on students. The main question of the study is: What factors do influence on the students'

satisfaction of the Islamic Azad University, Firoozkuh Branch from the offered services by the university? The secondary questions of the study are: 1) Each one of the effective factors on the students' satisfaction of the Islamic Azad University, Firoozkuh Branch, in which one of the offered categories in the Kano's model (must-be requirements, one-dimensional requirements and attractive requirements) does place? 2) Each one of the effective factors on the students' satisfaction of the Islamic Azad University, Firoozkuh Branch, in this related category and based on the students' view point what priority does allocate to it?

## **2. Literature Review**

### **2.1. Kano's model of customer satisfaction.**

Kano and et al. (1984) developed a model to characterize the attribute of a product or service based on how well they are able to satisfy needs (Tan and Pawitra, 2001). The Kano model can help to gain a profound understanding of customer satisfaction.

#### **2.1.1. The must-be or basic requirements (needs).**

For these needs, customers will be extremely dissatisfied if these requirements are not fulfilled. However, customer satisfaction does not rise above natural even with a high performance. Fulfilling the must-be needs will only lead to "not dissatisfied". (Matzler and Hinter Huber, 1998).

#### **2.1.2. The one-dimensional requirements (needs).**

For these needs, customer satisfaction is proportional to the level of fulfillment the higher the level of fulfillment, the higher the customer's satisfaction. In other words, customer satisfaction is a linear function of the performance of the product/service attribute.

#### **2.1.3. The attractive or Excitement requirements (needs).**

For these needs, they pose the attributes which have the great influence on how satisfied a customer will be. These needs are not explicitly expressed or expected by customers. Fulfilling these requirements leads to more than proportional satisfaction. Yet there is not a corresponding decrease in customer satisfaction if these needs are not met. (Hinterhuber and et;al,1994).

## **3. The research methodology**

This study is a field method in which focus group interview was used resulted exploration of 27 effective factors for students' satisfaction that were used as indexes for questionnaire. The number of the current research sample members is 384 persons the volume of which is gained through the Morgan table. The samples were chosen by stratified random sampling method students in levels of associate of arts, B.S, and Ms. Degrees. The applied questionnaire in this research includes 4 sections each of which is described as below:

- The first section of this questionnaire consists of general questions.(the demographic features of the participants who are the students)
- The second and third sections of this questionnaire have been designed on the basis of standard method proposed by Kano model. On the based on Kano model, an even question is designed for each of product/ service features that the customer can select one of the 5 choices: I like it, it must be so, indifference, I live with and I dislike it, which on the base of Likert scale have been designed.
- The fourth section of the questionnaire includes 27 questions. In this section, the importance of each of the effective factors on students' satisfaction has been questioned from the view points of the students, and the Likert scale is used to design it which is one of the common measurement scales. The main objective of the designing this section is the priorities of each of the effective factors on students 'satisfaction.

### **3.1 Data analysis methods.**

The gained data of the questionnaires were analyzed in three stages. First a Binominal test was administered and effectiveness of 27 variables on the student s satisfaction was clarified. On the second stage, based on Kano's model the kind of influence of 27 variables on the student s satisfaction was clarified. On

the final stage, Friedman test was administered to identify the priority of the 27 influential variables on student s satisfaction.

### 3.2 The test of variables’ influence on students’ satisfaction (Binominal test) .

To evaluate the influence of all 27 variables on student’s satisfaction, the Binominal test has been used Indeed, in this section the hypothesis has been tested( $H_0 = 27$  variables don’t influence on students’ satisfaction -  $H_1 = 27$  variables influence on students’ satisfaction). Regarding to obtained results, with 95 percent of level of confidence, science the sig is less than the error. ( $0.000 < 0.05$ ), we arrive at the result that the hypothesis of  $H_0$  is rejected.

### 3.3 Variable analysis by using Kano model.

The goal of this section is the identification and classification of the effective 27 factors on the students’ satisfaction into 3 groups: must - be requirements, one-dimensional requirements and attractive requirements. The data obtained were tested by means of Spss Frequency analysis, and Kano’s model.

### 3.4 The effective variables priorities on the students’ satisfaction (Friedman Test).

The Friedman Test has been used in order to analyze data obtained from the fourth section of the questionnaire and also priorities of these 27 variables. The mean rank of the effective variables on the students’ satisfaction of Islamic Azad University, Firoozkuh Branch is not equal to each other, in other words, some variables are more important than the others.

Table1. The priorities of the effective attractive variables on the students’ satisfaction of Islamic Azad University, Firoozkuh Branch

Number	Effective factors on the students’ satisfaction	Average	Deviation criterion	Mean rank	priorities
1	Existing of the employment unit in university to help the students in the finding an appropriate job in relation with their course of study	4.33	0.902	2.79	First
2	The increasing of the amount of the students’ loan to pay the tuition fee	4.28	0.896	2.65	Second
3	Administering MS and PHD preparation classes by university	4.04	1.006	2.43	Third
4	Availability of the shopping centers in university	3.78	1.102	2.13	Fourth

Table 2. The priorities of the effective one- dimensional variables on the students’ satisfaction of Islamic Azad University, Firoozkuh Branch

Number	The effective variables on the students’ satisfaction	Average	Deviation criterion	Mean rank	priorities
1	Feasibility on students’ transferring to their ideal universities	4.11	1.027	6.88	First
2	Existing of the PHD - degrees in university	4.06	1.064	6.87	Second
3	Existing of the close relationships with the professors	4.09	1.003	6.85	Third
4	Feasibility of wireless internet usage	4.02	1.059	6.81	Fourth
5	Providing of the student’s associations for supporting from students’ rights.	3.96	1.146	6.66	Fifth
6	Existing of the medical centers in the university	3.98	1.101	6.61	Sixth
7	Administration various English language courses to prepare the students for different tests like TOFELL	4.00	1.009	6.57	Seventh
8	Making educational consulting and psychological centers in the university	3.93	1.178	6.52	Eighth
9	Using famous professors as their members of scientific board	3.97	1.031	6.41	Ninth
10	The administration of the scientific seminar and inviting from international, national, famous professors	3.91	1.060	6.25	Tenth

11	The sufficiency of parking lots.	3.78	1.111	5.85	Eleventh
12	Performing of the celebrations on different occasions and inviting from famous individuals.	3.72	1.135	5.73	Twelfth

Table 3. The priorities of the effective must - be variables on the students' satisfaction of Islamic Azad University, Firoozkuh Branch

Number	The effective variables on the students' satisfaction	Average	Deviation criterion	Mean rank	priorities
1	Handling students' administrative work with optimal rapidity and care.	4.31	0.909	6.65	First
2	The polite treatment of the university staff.	4.17	1.136	6.36	Second
3	The beauty and cleanness of the university classes.	4.15	1.099	6.28	Third
4	A rich central library	4.13	1.058	6.27	Fourth
5	Providing higher scientific degrees on behalf of professors	4.16	0.973	6.17	Fifth
6	The cleanness and beauty of the dormitory surrounding	4.04	1.143	5.95	Sixth
7	The beauty and cleanness of the university yard.	4.04	1.094	5.86	Seventh
8	Availability of the buffet in the dormitory	3.99	1.035	5.71	Eighth
9	Feasibility of giving some student's services (such as: food reservation, the receipt of the student's letters, offering the graduating affairs, giving loan) by the university site.	3.96	1.123	5.64	Ninth
10	Availability of the instructional modern equipments in the classes (for example, video projector)	4.01	1.058	5.62	Tenth
11	Feasibility of digital libraries and international valid scientific site by the university site.	3.96	1.056	5.50	Eleventh

#### 4. Results

Studies show that the variables of the feasibility of wireless internet usage, the sufficiency of parking lots, providing of the student's associations for supporting from students' rights, performing of the celebrations on different occasions and inviting from famous individuals, making educational consulting and psychological centers in the university, administration of the scientific seminar and inviting from international, national, famous professors, feasibility on students' transferring to their ideal universities, existing of the close relationships with the professors, using famous professors as their members of scientific board, existing of the PHD - degrees in university, and administration various English language courses to prepare the students for different tests like TOFELL are one - dimensional requirements.

The obtained results of the effective 27 variables consideration on the students' satisfaction show that the variables concerning to the feasibility of giving some student's services (such as: food reservation, the receipt of the student's letters, offering the graduating affairs, giving loan) by the university site, feasibility of digital libraries and international valid scientific site by the university site, the beauty and cleanness of the university yard, the beauty and cleanness of the university classes, the polite treatment of the university staff, handling students' administrative work with optimal rapidity and care, availability of the instructional modern equipments in the classes (for example, video projector), availability of the buffet in the dormitory, the cleanness and beauty of the dormitory surrounding, a rich central library, and providing higher scientific degrees on behalf of professors are those of mast - be requirements .

The obtained results of the 27 variables consideration by using the Kano model has shown that variables such as: Availability of the shopping centers in university, existing of the employment unit in university for helping the students in finding an appropriate job in relation with their course of study, administering MS

and PHD preparation classes by university and increasing of the amount of the students' loan to pay the tuition fee are the attractive requirement.

## 5. Discussion

In 2008 a study has been done by Bilgili and Unali in Atatürk University. The subject of this study was “*Kano Model Application for Classifying the Requirements of University Students*”. In this study, the requirements of customer/students who take education service at Ataturk University are aimed to determine. Firstly, doing focus group interview The focus group study ended up with a total of 35 potential student requirements and the questionnaires were prepared. The questionnaires were applied to Ataturk University students. The requirements obtained according to the data were classified by means of Kano Model as basic requirements, expected requirements, and exciting requirements.

According to the frequently used answers in Kano Model applied in order to determine the students' expectations from the university services, out of the 35 requirements, 6 variables have been found out to be indifferent requirements; these are as in the following: the number of students in the classrooms, the existence of the sign boards on campus and university buildings, the existence of student unions and clubs, the psychological counseling services, the existence of a place where students could meet with the teaching staff at weekends, the application of standard deviation in the exams. All the other requirements are placed as one-dimensional requirements.

The purpose of our study is primarily identifying the effective services factors on students satisfaction offered by Islamic Azad University Firoozkuh Branch, secondly classification of these factors and finally determination of the priorities of any mentioned factors in the related category based on Kano's model.

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