

CHAPTER 3

CONCEPTUAL BACKGROUND

3.1 Introduction

3.2 New Product Development

3.3 Students as Customers

3.4 Product and Service Quality

3.5 Kano Satisfaction Model

3.6 The Kano Methodology

CHAPTER 3

CONCEPTUAL BACKGROUND

3.1 Introduction:

The concept of marketing is essentially a concept of customer orientation, competition orientation and ability to respond to environmental changes before competition does.¹ Customer buys the product as they are trying to satisfy their specific need. So it is prime most concern of organization to understand and respond to customer needs. Also to become successful for the organization, it needs to identify the competitive advantage and need to increase it to sustain in competition. As many times it is been preached that customer is king, the organization to become customer centric, it needs to cater to demands of the external as well as internal customers. External customers will buy products which are offering better quality solution to the needs. And to have better product or service quality and its delivery to customer, organization needs to satisfy first the internal customers.

The internal customer's basic requirements are²

1. Colleagues who are friendly and willing to help
2. Courtesy and respect
3. Efficient, friendly and knowledgeable concepts
4. Pleasant approach
5. Fulfillment of expectations

3.2 New Product Development:

Today we are seeing the emergence of global society and universal rules. An organization's competitiveness is greatly determined by its ability to respond within a given time frame, determined by market forces and not by its competencies. More and more customers have and will come to expect global products and services at local prices. The ability to creatively design a product for the buyer has become the differentiating aspect in today's marketing environment. To differentiate the products or services from the competitors, the organization needs to update and develop new

¹ Saxena, R. (2006). Marketing Management (Third edition). Delhi, India: Tata McGraw Hill. pp. 9

² Saxena, R. (2006). Marketing Management (Third edition). Delhi, India: Tata McGraw Hill. pp. 14

products. Some of the factors which contribute to development of products are as given below.

Factors Contributing to New Product Development³

3.2.1 Change in Customer Preferences

The change in customer life styles leads to change in customer preferences and expectations from the products and services. Day by day the customer expectations from the products and services are increasing due to fast information flow between different cultures. Also due to globalization and availability of foreign company products, the customer expectations and preferences also getting increased tremendously.

3.2.2 Technological Changes

The change in technology or advancement in technology leads to superior quality of products or services and also superior in application and communication. As there is continuously changing technological advancements in manufacturing and electronics and communication facilities like mobile and satellites etc, the customer expectations are on the rise and will lead to new innovative and developed products.

3.2.3 Government Policy

Government policies like Liberalization, Privatization and globalization, encourage competition to motivate the organization to offer quality products and services and also to develop these. As due to open economy the products of foreign companies are available at local market places at cheap prices.

3.3 Students as Customers:

In the education sector as there will be entry of foreign Universities there will be tough competition. Also with respect to education there will be lot of changes as many students will be interested in doing Post graduate education from the well known brand Universities. So it is needed to look meticulously at the student satisfaction and student expectation from the education and its providers.

Customer Satisfaction

³ Saxena,R.(2006).Marketing Management(Third edition).Delhi, India:Tata McGraw hill. pp. 273

The Customer satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations. If performance falls short of expectations, the customer is dissatisfied. If the performance matches expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted.⁴

Customer Expectation

Customers form their expectations from the past buying experience, friends' and associates' advice and marketers' and competitors' information and promises.

When organization raise expectation too high, the buyer is likely to be disappointed. And when expectations are too low, the organization will not be able to attract enough buyers (although it will satisfy those who do buy).

The higher education has specific features like imparts in depth knowledge and understanding so as to advance students to new frontiers of knowledge in different walks of life; develops students ability to question and seek truth and makes him/her competent to be a critique on contemporary issues; broadens the intellectual powers of the individual within a narrow specialization; makes the students to know more and more about less and less; and gives the students a wider perspective of the world around.⁵

3.4 Product and Service Quality:

Quality is defined by different ways by different authors. Quality guru J.M. Juran defined quality as 'fitness for purpose', Quality guru Philip Crosby defined quality as 'conformance to specifications', also different definition of quality is 'ability to consistently meet or exceed customer expectations'. But the definition given by American Society for Quality (ASQ) is quite rich and applicable to all products and services and it is "Quality is totality of features and characteristics of a product or service that bear on its ability to satisfy stated and implied needs.

⁴ Kotler P. and Keller K L, Marketing Management, pp. 144

⁵ Balamohandas V and Sharma M., Quality Teachers: A Must for Quality Higher Education, University News, Association of Indian Universities. Vol.50, No.3, Jan 16-22, 2012, pp. 6

To improve the quality of education the following ways and means can be taken care of⁶

1. Shortage of competent and committed faculties
2. Promoting research culture
3. Preparing course material specific to Industry context
4. Corporate governance for the Institutions
5. Library and computer and other facilities
6. Lack of interaction with industry
7. Negligible or no investment in faculty development

There are different customer satisfaction models like 'SERVQUAL Model' (Zeithaml, Parasuraman & Berry), 'Student Satisfaction Inventory' (Noel-Levitz Inc.), 'Business Student Satisfaction Inventory' (E Nick Maddox 1995), but researcher is going to employ the Kano Model of Customer satisfaction.

3.5 Kano Satisfaction Model:

In the 1970s and early 80s, the traditional approach for product or service attributes was 'More is better'. But Dr. Noriaki Kano⁷ challenged this with approach of 'attractive quality creation', he first put forth performance of some attributes creates higher satisfaction than the other.⁸ Dr. Kano observed that the performance of the product or service attribute is not equal in the eyes of the customers. Performance of the certain attributes creates higher satisfaction than the others. So the Kano model was developed by Dr. Noriaki Kano in the year 1984 distinguishing different product or service attributes into five categories.

The Kano model has emerged into one of the most popular quality models nowadays. It has grabbed the attention of many marketing practitioners and researchers who are involved in product or service development projects and who are trying to identify those product/service features that represent key drivers of customer satisfaction and dissatisfaction.⁹

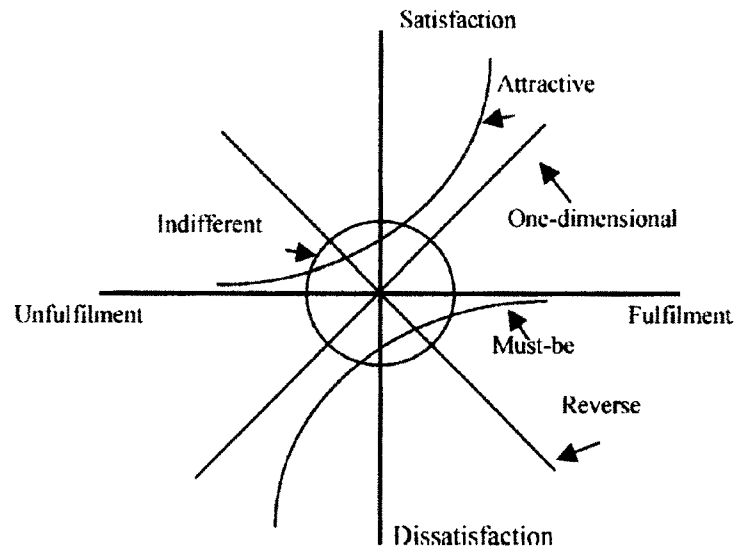
⁶ Chowdhary J N, Quality Assurance in Higher Technical and Management Education, University News, Association of Indian Universities. Vol.50, No.10, March 05-11, 2012, pp. 24

⁷ Noriaki Kano is an educator, lecturer, writer and consultant in the field of quality management.

⁸ Mazur, R. E. The Kano Model: Recent Developments. *The Eighteenth Symposium on Quality function Deployment*, (2nd Dec, 2006). (pp. 109-116). Austin Texas.

⁹ Mikulic Josip. The Kano Model- A review of its Application In Marketing Research from 1984 to 2006. Conference proceedings of 1st International conference Marketing challenges in transitional society. 21/9/2007, 87-96

Figure 3.1
Kano Satisfaction Model¹⁰



As shown in figure 3.1 the X axis has the level of fulfillment and Y axis has the level of satisfaction.

The different attributes which are classified under five categories are¹¹

1. 'mi ryoku teki' means 'attractive or exciting'
2. 'ichi gen teki' means 'one dimensional or desired'
3. 'atari mae' means 'must be or expected'
4. 'mu kan shin' means 'indifferent'
5. 'gyaku' means 'reverse'

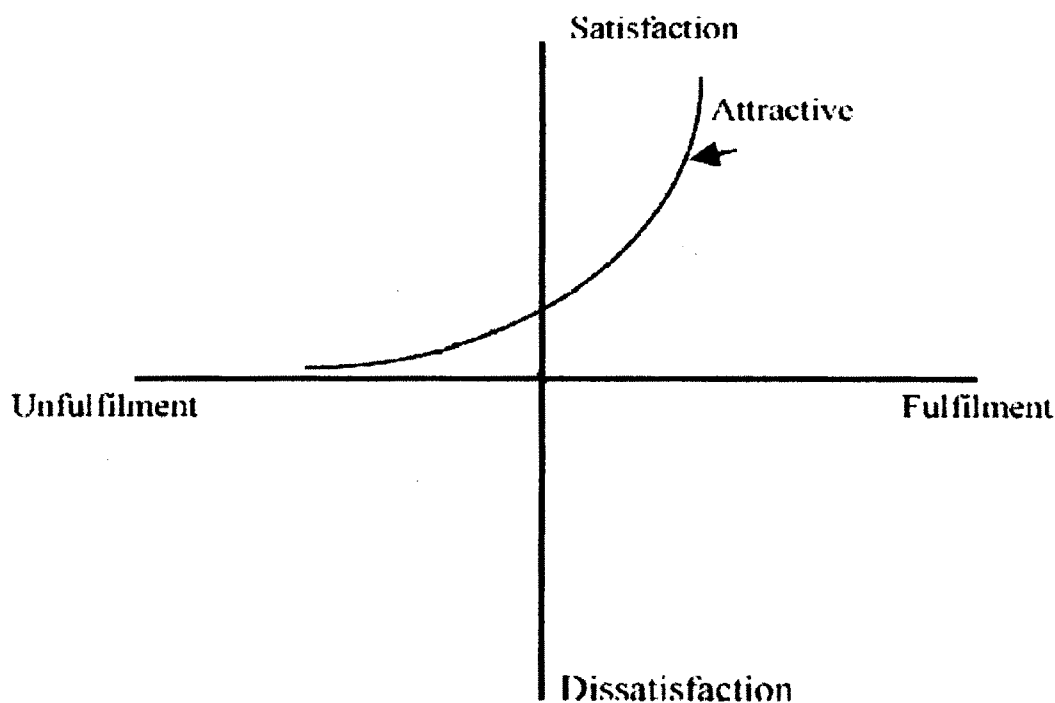
¹⁰ Ching-Chow Yang. The refined Kano's Model and its application. TQM Vol.16. No. 10, 1127-1137, Dec. 2005

¹¹ Mazur, R. E. (2nd Dec, 2006). The Kano Model: Recent Developments. *The Eighteenth Symposium on Quality function Deployment*, (pp. 109-116). Austin Texas.

3.5.1 Attractive or Exciting Attributes:

As shown in figure 3.2 these requirements are plotted on axis. These requirements are having the greatest influence on customer satisfaction. Fulfilling these requirements leads to more than proportional satisfaction but if they are not met, there is no feeling of dissatisfaction. As the level of fulfillment goes on increasing the level of satisfaction also increases tremendously. But as the level of fulfillment decreases the level of satisfaction does not decrease to negative value. These requirements are neither explicitly expressed nor expected by the customer.

Figure 3.2
Attractive Attribute of Kano Model

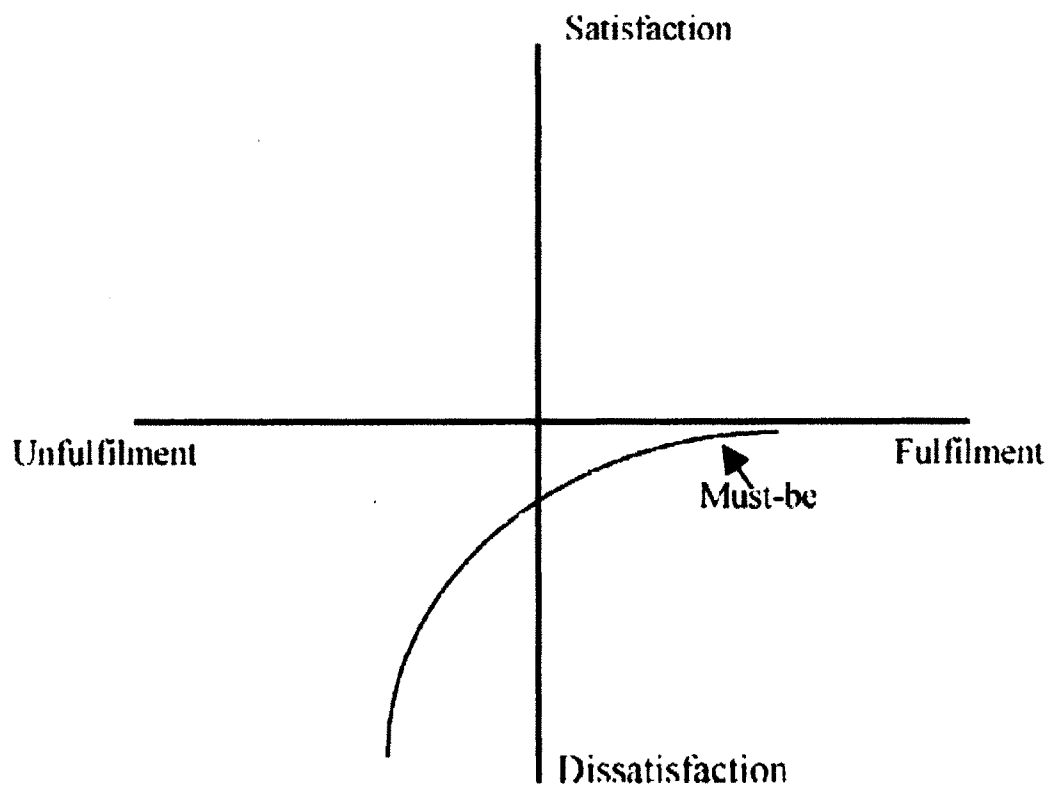


In case when you are using credit card or debit card then bank official immediately calls you on your cell or messages are delivered for confirming that actually you are using the credit or debit card. As it is not expected by the customers that they should receive a call or message but if they receive they feel tremendously satisfied about the service of the bank. So this kind of feature call alert or message alert are not expected by the customers but if they receive they feel tremendously satisfied. There is also risk while offering the attractive attributes as these are offered as extra services but afterwards every time customers will start expecting these services.

3.5.2 Must be Attributes:

The Must be attributes line starts from negative value of level of satisfaction and negative value of level of fulfillment. As the level of fulfillment increases the level of satisfaction also increases and reaches up to the X axis. So the level of fulfillment even though reaches to maximum it does not increase the satisfaction but just leads to a state of not dissatisfied. If these requirements are not fulfilled, the customer will be extremely dissatisfied. On the other hand, as the customer takes these requirements for granted, their fulfillment will not increase satisfaction. Fulfilling the must-be requirements will only lead to a state of not dissatisfied. These attributes are not explicitly expressed but expected by the customers.

Figure 3.3
Must be Attribute of Kano Model



In a restaurant, water is expected by the customers, if provided will not create much satisfaction but if not provided then will create dissatisfaction.

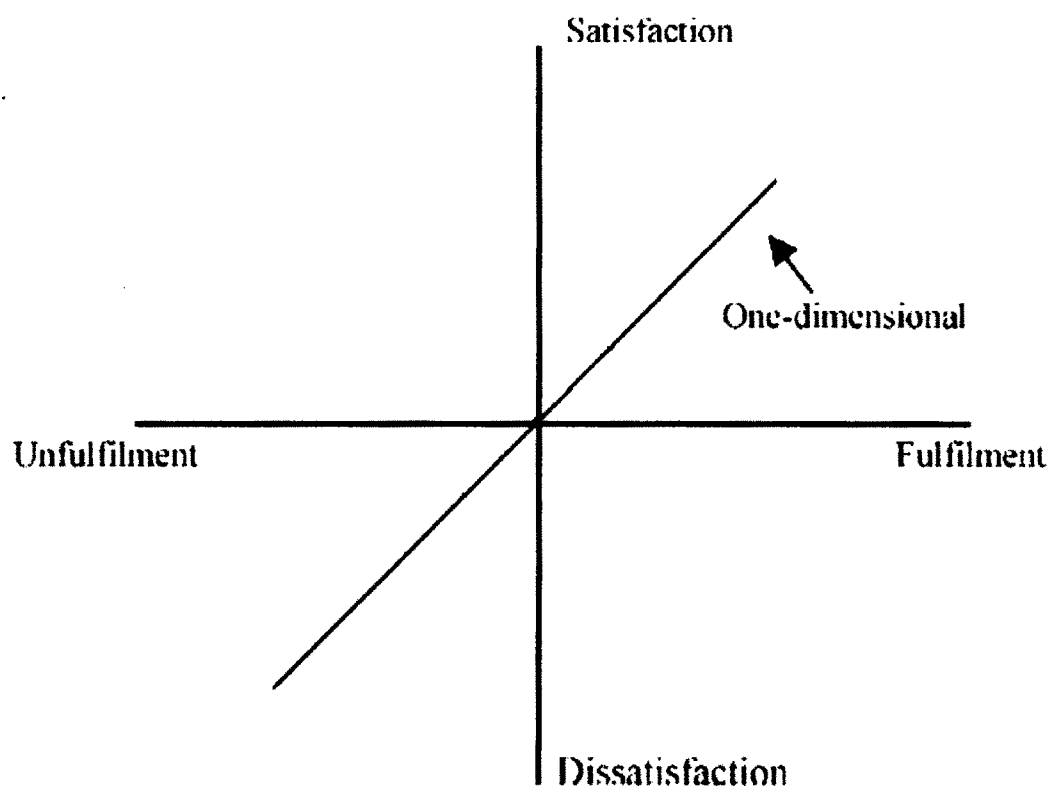
In the two wheeler market, in the budget bike segment, 100 cc engine bike, the fuel economy is expected and taken for granted. But if the bike is not providing the fuel economy then it will create dissatisfaction.

3.5.3 One Dimensional Attributes:

The One dimensional attributes are as shown in figure, the line starts from the negative value of level of fulfillment and negative value of level of satisfaction. As the level of fulfillment goes on increasing the satisfaction level also increases.

With regard to these requirements, customer satisfaction is proportional to the level of fulfillment – the higher the level of fulfillment, the higher the level of customer’s satisfaction and vice versa. These requirements are explicitly demanded by customer.

Figure 3.4
One dimensional attribute of Kano Model

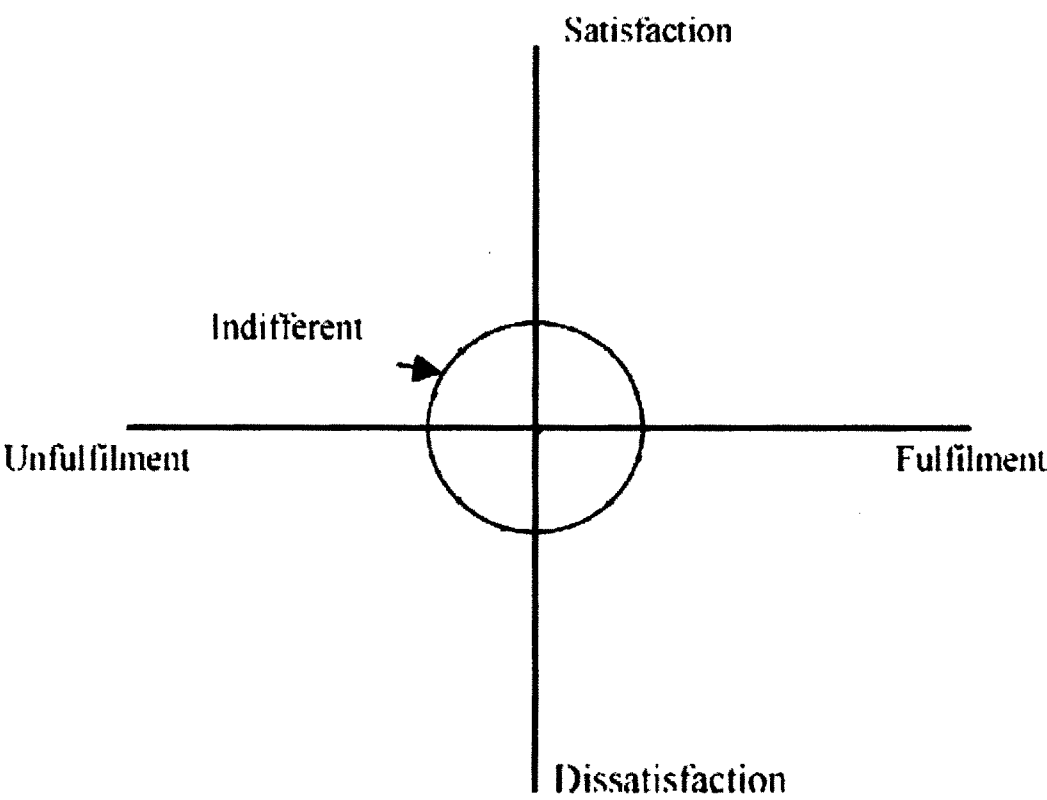


In a restaurant customers are expecting the good quality of the foods or snacks. As the level of good quality of foods or snacks increases, customer’s satisfaction level also increases. But as the food or snacks quality decreases, customers will be dissatisfied or their level of satisfaction will decrease.

3.5.4 Indifferent Attributes:

These attributes whether fulfilled or not, result into neither in satisfaction nor dissatisfaction. Customers simply don't care about these requirements so these are not explicitly expressed. The level of fulfillment and level of satisfaction doesn't have much impact on each other.

Figure 3.5
Indifferent Attribute of Kano Model

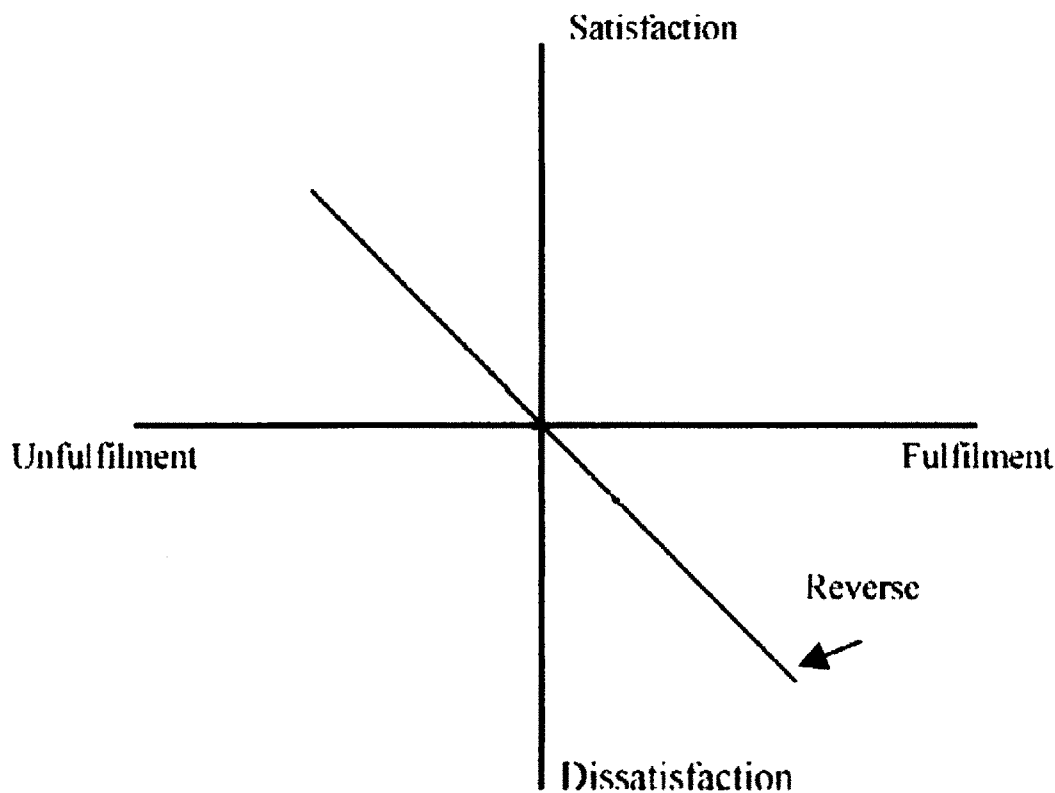


The seating arrangement for the customers in a post office is an indifferent requirement. The customers are not getting affected by the seating arrangements for them in post office. The seating arrangement presence will not create high satisfaction or its absence will not have high dissatisfaction.

3.5.5 Reverse Attributes:

These attribute’s presence is not satisfying and their absence is satisfying. Customers are even may be willing to pay not to have these attributes into the product or service. So these are not at all expressed and not expected attributes. This attribute is exactly opposite of one dimensional attribute. It starts with positive value of satisfaction with the low level of fulfillment but it goes on with low level of satisfaction with higher level of fulfillment.

Figure 3.6
Reverse Attribute of Kano Model



There is also a category named as Questionable Attribute, which indicates that there is contradiction between the answers given to functional and dysfunctional questions.¹² It just indicates that the respondent has not understood the question properly and given wrong response.

¹² Kano questionnaire consists of functional and dysfunctional question; answers of both questions will give category of attribute.

3.6 The Kano Methodology:

Besides Kano model, Dr. Kano also came up with the methodology¹³ for assessing the different elements which then can be categorized into different attributes.

3.6.1 Framing the Questionnaire:

The questionnaire consists of functional and dysfunctional questions for each product or service attribute. Functional question has positive tone and dysfunctional question has negative tone towards the requirement.

The functional question: How do you feel if ‘X’ feature is present in ‘Y’ service, and dysfunctional question: How do you feel if ‘X’ feature is not present in the service? Customer can answer each question with any one of five alternative answers.

Table no. 3.6.01
Sample Kano question
Following table depicts the style in which Kano questions are asked

Question	Alternative Answers
Functional question: How do you feel if the college has Business Standard newspaper?	1. I like it that way 2. It must be that way 3. I am neutral 4. I can live with it 5. I dislike it
Dysfunctional question: How do you feel if the college does not have Business Standard newspaper?	1. I like it that way 2. It must be that way 3. I am neutral 4. I can live with it 5. I dislike it

3.6.2 Processing the Responses

The response to functional and dysfunctional question is been mutually correlated and tabulated to determine the Kano attributes. The table no.2 shows the responses for the functional question with alternative answers as ‘Like’, ‘Must be’, ‘Neutral’, ‘Live with’ and ‘Dislike’ along with parallel responses for the dysfunctional question with alternative answers like ‘Like’, ‘Must be’, ‘Neutral’, ‘Live with’ and ‘Dislike’.

¹³ Center for Quality Management Journal, Volume 2 No.4, Fall 1993

Table 3.6.02¹⁴
Kano Attributes

Student requirement		Dysfunctional question				
		Like	Must be	Neutral	Live with	Dislike
Functional question	Like	Q	A	A	A	O
	Must be	R	I	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	I	M
	Dislike	R	R	R	R	Q

A: Attractive
M: Must be
R: Reverse

O: One dimensional
Q: Questionable
I: Indifferent

The response for the functional question and dysfunctional question will give the Kano attribute category for that particular question which is as shown in table no. 2.

Attractive attribute (A) will come when the response for the functional question is ‘like’ with the dysfunctional question response of ‘Must be’, ‘Neutral’, ‘Live with’ or ‘tolerate it’. The Must be attribute(M) will come when response for functional question is ‘Must be’, ‘Neutral’ and ‘Live with’ or ‘tolerate it’ with the response for the dysfunctional question is ‘dislike’.

The One dimensional attribute (O) will come when the response for the functional question is ‘like’ with the response for the dysfunctional question is ‘dislike’.

The reverse attribute (R) will come when the response for the functional question is ‘must be’, ‘neutral’ and ‘live with or tolerate it’ with the response for the dysfunctional question is ‘like’. Also the reverse attribute (R) will come when the response for the functional question is ‘dislike’ with the response for the dysfunctional question is ‘like’, ‘must be’, ‘neutral’ and ‘live with or tolerate it’. The Indifferent attribute (I) will come when the response for the functional question is ‘must be’, ‘neutral’, ‘live with or tolerate it’ with the response for the dysfunctional question is ‘must be’, ‘neutral’, ‘live with or tolerate it’ in any combination.

The last which we cannot say it as attribute which is questionable which just indicates that the respondent doesn’t understood the question. This will come when the response for the functional question is ‘like’ with the response for the dysfunctional question is ‘dislike’. And vice versa, for the functional question the response is ‘dislike’ with response for the dysfunctional question is ‘like’.

¹⁴ Center for Quality Management Journal, Volume 2 No.4, Fall 1993

The responses given by the students were tabulated as shown in table 3.

Table 3.6.03¹⁵
Attributes tabulation

Customer responses to questions	A	M	O	R	Q	I	Total
1							
2							
3							
...							
...							
...							

3.6.3 Analyzing the Results

The tabulated responses for the questionnaire from the students are to be processed through Kano evaluation criteria.

A) $M > O > A > I$

This criteria suggest that any Institution or Organization, should fulfill its customers with first Must be attributes then One dimensional attributes and then Attractive attributes and then last Indifferent attributes. It is based on the impact level on customer satisfaction. The highest impact on customer satisfaction is from the Must be attributes. As these attributes are not fulfilled they will lead to dissatisfaction among the customers. The second most impact on customer satisfaction is from the One dimensional attributes. As these attributes level of fulfillment increases, the level of satisfaction also increases linearly. The third most impacting attributes are Attractive attributes, which are not expected but if fulfilled the level of satisfaction increases tremendously. And the least impactful attributes are indifferent attributes; fulfillment or non fulfillment will have less impact on satisfaction.

So the must be parameters should be fulfilled first by the Management Institute then the Institute should go ahead with fulfilling the one-dimensional parameters and then the attractive parameters should be fulfilled and then at last Institute should think of fulfilling the Indifferent parameters.

¹⁵ Center for Quality Management Journal, Volume 2 No.4, Fall 1993

B) Extent of Satisfaction and Extent of Dissatisfaction¹⁶

Extent of Satisfaction $(A + O) / (A + O + M + I)$

The extent of Satisfaction when indicates high positive value, student satisfaction will increase tremendously when the requirements are fulfilled.

The low value of extent of satisfaction indicates the satisfaction of students will be less increased due to fulfilling the requirements.

Extent of Dissatisfaction $(O + M) / (A + O + M + I)$

The greater negative value of extent of dissatisfaction indicates student satisfaction level will decrease tremendously if these are not provided.

The less negative values of extent of dissatisfaction indicates as the level of fulfillment of these parameters decrease there will be less increase in student dissatisfaction.

¹⁶ Center for Quality Management Journal, Volume 2 No.4, Fall 1993