ORIGINAL RESEARCH PAPER

Management

Importance Performance Analysis and Servqual Model: an Integrated Approach for Enhancing Customer Satisfaction

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ABSTRACT

The paper aims to evaluate the service quality dimensions with reference to the education sector (Improvement Factor IF) along with the application of importance Performance Analysis (IPA Framework) and (The study is qualitative in nature which follows the non- probability sampling method. In order to collect data, a well defined questionnaire consisting of close ended questions on service quality attributes, namely reliability, assurance, tangible, empathy and responsiveness have been prepared to record importance and performance level from customers. IPA Grid has been formed and Improvement Factor (IF) has also been calculated to look at the level of improvement needed for each attribute. This study brings out the application of SERVQUAL model, IPA framework and Improvement Factor, which helps in identifying areas for strategic focus to develop future strategies. From the research perspective, this study supports the adaptation of the IPA framework as an alternative/ integrative framework for evaluating customer satisfaction.

Introduction:

Importance of service quality for service providers, the service quality has always been the most important attribute and the consumer's perceptions are the only and the best way to measure service quality. The customer forms service expectations from many sources such as past experiences, positive word of mouth, advertisement, good reputation, goodwill, etc. In the present competitive era, service quality is a scorching issue. Now a days, organizations, whether it is a firm or a service industry, are trying o achieve customer satisfaction and loyalty by providing an efficient and improved service quality. The service quality refers to an approach shaped by an overall assessment of a firm's performance. The service quality is a vital and essential tool for attaining operational efficiency and improved business performance which help to gratify and maintain customer satisfaction. The customer satisfaction depends on factors such as reliability, assurance tangibles, empathy and responsiveness. In the table 1, various definitions of the service quality dimensions offered

Table 1: Service Quality Dimensions

DIMENSIONS	FEATURES	SPECIFIC CRITERIA FOR CUSTOMERS
RELIABILITY	Capability to do the services accurately at the promised time	• Timelines • Consistency / regularity • Accuracy • Error free records
ASSURANCE	Knowledgeable and courteous employees and their ability to inbuilt trust and spirit	• Staff expertise • Creditability • Safety and care • Problem resolution
TANGIBLES	Related to physical facilities, equipment, personnel and communication materials.	• Physical materials • Technology • Employees
EMPATHY	Provides individual attention to customers	• Access to staff • Communication • Individual attention
RESPONSIVENESS	Always ready to help customers and to provide timely services	• ready to help customers • Prompt attention to queries • Complaint handling

Importance-Performance Analysis

Martilla and James (1977), the first protagonist of the service quality, introduced the method to measure client satisfaction for a product or service based on Importance Performance Analysis (IPA) matrix while it has been widely used for analyzing an organization's status/position and determining its weak and strong points. The IPA Matrix is constructed on the basis of two components e.g. the importance of a product or service to a client and the performance of a business in providing that service or product (Martilla & James, 1977). This matrix is divided into four quadrants: (1) Concentrate Here; (2)Keep Up the Good Work; (3) Low Priority; and (4) Possible Overkill, to enable each attribute to be plotted into the grid. Through this matrix plotting combinations of four aspects related to importance of product in the market and its service delivery, this is able to measure the actual satisfaction level as well as highlight important key areas for improvements. This technique helps identify attributes that have high scores and attributes that need to be improved and require action immediately. It is used to provide directions for making strategic marketing decisions. The objective of IPA is to identify the most crucial factors or service attributes. Simple application, analyzing and assessing the results and its low cost made this model popular (Oh, 2001). The IPA consists of a pair of coordinate axis where the 'importance' (y-axis) and the 'performance' (x-axis) of the different elements involved in the service are compared. The original IPA framework by Martilla and James (1977) is graphically presented on a grid divided into four quadrants, which is clearly depicted in Figure 1.

FIGURE 1 Original IPA Framework

Table 2 Description of IPA Framework

Quadrants	Implication
Quadrant I Concentrate Here	While these attributes are perceived to be important, scores of the variables reflecting performance are low where Improvements are needed.
Quadrant II Keep up the good work	These attributes are not only important, their performance scores are also high; hence these are needed to be continued.
Quadrant III Lower priority	Attributes here are not perceived to be very important as well as performances are low. There is no need for managers overly concerned, and limited resources should be expended on this low priority cell.
Quadrant IV Possible over kill	These attributes are superfluous / unnecessary of low importance, yet performances are relatively high here.

Improvement Factor

Improvement factor indicates the overall variation between level of performance and importance of service quality attributes that has been depicted as a number usually in percentage. Apart from this improvement factors also suggest how improvement is needed to

maximize the satisfaction level. Yang (2002) defines the improvement factor as:

$$\text{Improvement Factor (IF)} \quad = \quad \frac{Performance\ (P)\ -\ Importance\ (I)}{Importance\ (I)}$$

In the ideal case, the (P-I) value should be Zero, so that maximum satisfaction can be achieved. Usually the level of satisfaction may deviate from level of importance. If the satisfaction will be lower than importance or IF<0 or absolute value equal to one, the factor requires more efforts to be improved. This method helps understanding customer's needs in a more precise way. Hence, this research adapted IPA model and improvement factor to measure the service quality of the higher education sector.

Review of Literature

According to Martina, J. A. and James, J. C. (1977) IPA is a technique for measuring attributes and performance and can be used for further development for making effective marketing programs. Silva, F. & Fernandes, 0. (2010) advocates the adaption of the IPA, the framework for evaluating satisfaction. Tzeng G.H.,Chang H. F. & Beaman J. (2011) explains that IPA is not a tool for final decision, but it is a tool for problem conceptualization and initial analysis. Tzeng G.H.& Chang H. F. (2011) concludes that three methods (SERVQUAL, Improvement Factor and IPA) are able to explain the significant amount of service quality. They also find service quality factors and IPA model have more comprehensive considerations in comparison to SERVQUAL and Improvement Factor.

Objectives

The overall objective of the study is to evaluate the service quality dimensions with reference to the Higher education sector along with the application of Importance Performance analysis (IPA Framework) and Improvement Factor. The study has covered the following subsidiary objectives in order to achieve this goal:

1. To analyze the importance and performance level for each service quality dimension.
2. To find out the improvement factor for each dimension.
3. To highlight important key areas for improvements, which require immediate action?

Research Design / Methodology

The paper followed descriptive Research Procedure with Non-probability sampling method in order to collect data. 50 customers have been taken as a sample size for the study by convenience sampling method due to easy accessibility and reach. The PG students of different departments of Jaipur National University providing higher education, at Jaipur region, Rajasthan, India have been contacted by the researcher in order to collect responses from the customers.

Data source
Primary Data:

This study follows the Survey method, under which a well defined questionnaire consisting close ended questions on service quality attributes namely, reliability, assurance, tangible, empathy and, responsiveness have been prepared to record importance and performance level from customer

Secondary Data: Secondary data were also referred in order to understand theoretical base for this study, supported by relevant concepts, theories, published reports etc. in the area of Service Quality and IPA Framework for its applicability.

Analysis and Findings
Table 3 Importance - Performance Rating and Improvement

S.No	Service Attribute	Performance Mean	Rank	Importance Mean	Rank	IF Mean	Rank	Quadrant
1	Infrastructural development	3.54	17.5	3.84	19.0	-0.078	7	III
2	Efficient transportation	3.64	15.0	4.1	13.5	-0.112	12	III
3	Physical appearance is visually appealing	3.76	11.5	4.42	5.0	-0.149	16	I
4	Availability of information related to product and services	3.78	10.0	4.2	10.0	-0.100	10	-
5	Take interest in solving customer's problem	3.8	9.0	4.54	2.0	-0.163	17	II
6	Employees are well dressed and neat in appearance	3.54	17.5	4.14	12.0	-0.145	13	III
7	Health and safety hygiene	3.92	7.0	4.18	11.0	-0.062	5	IV
8	Maintain error free records	4.06	3.0	4.3	9.0	-0.056	4	II
9	Latest Equipments and technology	3.68	13.0	4.08	15.5	-0.098	9	III
10	Employees understand my personal needs	3.48	19.0	4.08	15.5	-0.147	14	III
11	Service Delivery on time	3.66	14.0	4.4	6.5	-0.168	18	I
12	Organizing cultural fests	3.76	11.5	3.94	18.0	-0.046	3	III
13	Employees offer prompt service to customers	4.02	4.0	4.4	6.5	-0.086	8	II
14	Employees willing to help customers	4.18	1.5	4.7	1.0	-0.111	11	II
15	Behavior of employees builds customers confidence	3.82	8.0	4.48	3.5	-0.147	15	II
16	Knowledge of employees to handle customer queries	3.56	16.0	4.36	8.0	-0.183	19	I
17	Individual attention	3.96	6.0	4.1	13.5	-0.034	2	IV
18	Convenient operating hours	4	5.0	4.02	17.0	-0.005	1	IV
19	Ready response to customers request	4.18	1.5	4.48	3.5	-0.067	6	II

Table 3 represents the service quality attributes in which mean value of performance and importance has been calculated and ranked accordingly. Apart from this, improvement factor for each attribute has also been measured for which values turned out to be negative, which explains the variance between the levels of importance and performances. Also, improvement factor suggests up to what extent of improvement is needed to maximum satisfaction level as per the priorities of the customers. In the last, each attribute has been plotted in the IPA grid, which is shown in the last column of quadrant in figure 2.

Graphical Plotting of Service Quality Attributes on the IPA Grid

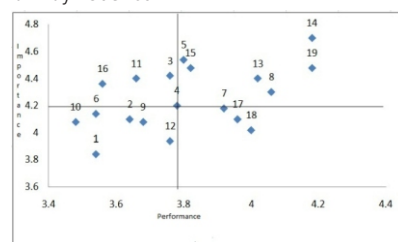The intersection of IPA grid is made available using the median level of importance and performance. Median values as a measure of central tendency are theoretically preferable to means because a true interval may not exist.

FIGURE 2 IMPORTANCE PERFORMANCE INDICATORS

TABLE 4 : FINDINGS OF IPA GRID

QUADRANTS	IMPLICATIONS
Quadrant I *Concentrate Here*	Attributes related to employees such as willing to help customers, helps to solve customers' queries are plotted in this quadrant. Since these are important and there are scope for improvement, the Institute should focus on these attributes on the priority basis in order to provide maximum satisfaction.
Quadrant II *Keep up the good work*	Attributes like timely services, error free records, behavior of employees, security while doing transactions, courteous behavior of employees, understanding specific needs are plotted into this quadrant which indicates that this Institute is able to maintain & delight their customers. These standards need to be maintained for the customer satisfaction
Quadrant III *Lower priority*	Attributes here are latest equipments, technology, physical appearances, employees' interest in solving customers' problems, timely information, prompt services, response to customer requests are falling in this quadrant. These attributes are important but least variation between performance and importance is observed. So less attention is required for these attributes.
Quadrant IV *Possible over kill*	Attributes like providing services at right time, convenient operating hours and individualized attention fall in this quadrant. Here, customers are very satisfied with the Institute's performances, but all the continuous efforts in delivering these services attributes will be futile because customers are already appeased. Therefore present efforts on these attributes are exaggerated and strategy makers should focus on the attributes where the efforts are required like for the concentrate here quadrant.

The generated quadrants can be helpful to conclude valuable suggestions which may be useful in future for the Institute.

Conclusion

This paper, on the basis of a new concept for measuring service quality with the application of IPA grid , studies service quality of Institute in jaipur region and finds improvement factors for better service delivery. We can conclude that these three methods, namely, Service quality, IPA framework and improvement factor used in the study are able to explain significant amount of service quality in the case studied. At the same time, by depicting level of improvement required for each attribute which is termed as improvement factor in the paper, this research is able to suggest areas of improvement for the Institute.