

Study on Demand for Service Quality of Aquarium by IPA

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Abstract: *This study adopted the Importance-Performance Analysis (IPA) to probe into customers' importance and satisfaction with service quality, in order to suggest operational strategy for aquarium H. This study distributed questionnaires to consumers of aquarium H. After retrieving the questionnaires, the priority to improve service quality was determined using IPA. The results suggested that service personnel always attend to the customers even when they are busy. The facility is clean, and routes and signs are clearly indicated. To consumers, these two items are highly important, but have not met their expectation. Hence, the aquarium should improve these items to enhance competitiveness.*

Keywords: *aquarium, IPA, service quality*

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I. Introduction

The aquarium market has gradually reached its maturity, hence, aquariums should show characteristics, recognize customers' needs, and provide satisfying quality, in order to attract more customers and increase profits. This study adopted the Importance-Performance Analysis (IPA) to probe into difference of aquarium customers' importance and satisfaction with items of service quality. Based on the results, this study determined the service items that should be urgently modified and improves them. By Responsiveness, Tangibility, Reliability, Care and Guarantee, this study analyzed service quality of the aquarium. IPA was also used to explore customers' difference of importance and satisfaction with items of service quality, and obtain improvement direction and priority of service quality in order to reinforce competitiveness.

II. Literature Review

Literature review includes two parts: study of service quality and Importance-Performance Analysis.

2.1 Service quality

Tsiotsou (2006) argued that service quality is customers' general evaluation on advantages, disadvantages and ranking of products. According to Parasuraman et al. (1988), with rapid change of market, service industry should efficiently provide service quality in order to enhance competitiveness. Bateson & Hoffman (2002) suggested that evaluation of service quality depends on customers' cognition after receiving service and the gap between customers' perceived and expected service. Haywood-Farmer (1998) proposed three dimensions of service quality: (1) equipment, processes and procedures; (2) service personnel's behavior; (3) service personnel's professional judgment. Parasuraman et al. (1988) argued that service quality includes five dimensions: (1) Reliability; (2) Responsiveness; (3) Guarantee; (4) Care; (5) Tangibility. According to SERVQUAL proposed by Parasuraman et al. (1988), this study classifies measurement dimensions of service quality into Responsiveness, Tangibility, Reliability, Care and Guarantee. Measurement indicators are modified from questionnaires of Mohsin & Ryan (2005), Ugboma et al. (2007), Chung & Chen (2015), Ha (2003), Parasuraman et al. (1988) and Haywood-Farmer (1988) regarding business characteristics of aquarium.

2.2 Importance-Performance Analysis

IPA is analytical method proposed by Martilla and James (1977) and it is a simple and effective research tool (Pike & Larkin, 2010). By analytical result, enterprise managers can recognize consumers' evaluation on services or products. Matzler et al. (2004) stated that IPA assists with companies to obtain priority to improve services and enhance customer satisfaction. Method of IPA is to calculate means of importance and performance of service quality items. Axis x means satisfaction and Axis y refers to importance. IPA divides the plane into quadrants A, B, C and D, as shown in Figure 1. Quadrant A - Zone of Concentrate Here: the quadrant is important for customers; however, their currently perceived performance is not as expected. It should be improved as priority. Quadrant B - Zone of Keep Up the Good Work: the quadrant is important for customers. The currently perceived performance is positive. Quadrant C- Zone of Low Priority: the quadrant is less

important for customers and their currently perceived performance is low. It is low priority of the enterprise. Quadrant D - Zone of Possible Overkill: the quadrant is less important for customers; however, their currently perceived performance is high.



Figure 1 IPA matrix

III. Research Method

According to SERVQUAL proposed by Parasuraman et al. (1988), this study classifies measurement dimensions of service quality into Responsiveness, Tangibility, Reliability, Care, and Guarantee. Service quality measurement items are modified from questionnaires of Mohsin & Ryan (2005), Ugboma et al. (2007), Chung & Chen (2015), Ha (2003), Parasuraman et al. (1988) and Haywood-Farmer (1988) regarding business characteristics of aquarium. Questionnaire of this study is measured by Likert 5-point scale. Service quality includes five dimensions: (1) responsiveness; (2) Tangibility; (3) Reliability; (4) Care; (5) Guarantee; this study distributed questionnaires from November to December 2018 and respondents were consumers of the aquarium. It retrieved 65 valid questionnaires and adopted IPA. Table 1 shows the reliability values. Nunnally (1978) suggested that in an exploratory study, a reliability greater than 0.7 is acceptable. All the reliability variables of this study are above 0.7, so the results carry sufficient reliability. This questionnaire is developed according to literature review, theories proposed by scholars and related literatures. Hence, it meets content validity.

IV. Results Analysis

As to analysis of service quality items, the measurement is based on a Likert 5-point scale. Importance and satisfaction with service quality items are scored according to responses selected by the subjects. “Highly important” or “highly satisfied” refers to 5 points. “Strongly unimportant” or “strongly unsatisfied” is 1 point. Importance and satisfaction analysis is shown in Table 2. Items in Zone of Keep Up the Good Work are item 4, item 5, item 6, item 7, item 10, item 13, item 18, Items in Zone of Possible Overkill are item 11, item 19, item 20. Items in Zone of Low Priority are item 1, item 3, item 9, item 12, item 14~17. Items in Zone of Concentrate Here are item 2, item 8

V. Conclusion and Suggestions

By questionnaire survey, this study treated customers of aquarium H as subjects. According to IPA results, items in Zone of Keep Up the Good Work are item 4, item 5, item 6, item 7, item 10, item 13 and item 18. It is the zone of competitive advantages and it should keep up the good work. Items in Zone of Possible Overkill are item 11, item 19 and item 20. Items in Zone of Low Priority are less important for consumers. However, if the aquarium improves these services, they can show the potential of advantages. Items in Zone of Concentrate Here are “service personnel are never too busy to respond to customers” and “interior facilities, circulation and signs are clear”. The manager should reinforce these services and strengthen service personnel educational training in order to upgrade competitiveness.

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Table1: The Cronbach’s α coefficients for all variables in this study

Questionnaire Dimensions	Item	Cronbach’s α	
		Importance	Importance
Responsiveness	1,2,3,4	0.761	0.773
Tangibility	5,6,7,8,9	0.796	0.758
Reliability	10,11,12,13	0.807	0.812
Care	14,15,16,17	0.828	0.841
Guarantee	18,19,20	0.835	0.784

Table2: Analysis of Importance and Satisfaction of Service Quality

Item	Service quality item	Satisfaction	Importance
		Average	Average
1	Service personnel can immediately respond to customers’ demands.	3.846	4.077
2	Service personnel are never too busy to respond to customers	3.938	4.154
3	Service personnel provide procedural description in detail	3.892	4.092
4	Service personnel are willing to assist with and serve customers	4.031	4.154
5	Service personnel show clean and tidy costumes and appearance	4.108	4.185
6	Modern and professional facilities in gas station	4.062	4.185
7	Bright and clean appearance of facilities	4.046	4.154
8	Interior facilities, circulation and signs are clear	3.969	4.169
9	Service facilities meet customers’ needs	3.985	4.108
10	Service personnel assists with customers to solve problems	4.031	4.169
11	Service personnel fulfill commitment to customers	4.062	4.138
12	Service personnel accomplish the work immediately	3.985	4.138
13	Service personnel can provide reliable service	4.092	4.215
14	Service personnel actively care about customers individually	3.862	4.015
15.	Service personnel treat customers’ benefits as priority	3.938	4.123
16.	Service personnel recognize individual customers’ needs	3.892	4.077
17.	They provide services by recognizing customers’ needs	3.969	4.138
18.	They can respond to customers’ questions with sufficient knowledge	4.108	4.231
19.	Reliable service for customers in workplace	4.077	4.138
20.	Service personnel provide responsible service	4.062	4.123
Average		3.998	4.139

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