

## **Research on Service Quality Requirements in Camping Area**

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### **Abstract**

This study uses the Importance-Performance Analysis (IPA) method to identify priority service quality improvement items, and then uses the Kano model to establish cost-effective service quality improvement items to provide operators with business strategies to improve service quality. This study targeted customers of the W camping area through a questionnaire survey. A total of 75 questionnaires were distributed, and 63 valid questionnaires were issued. According to IPA's analysis, items falling in priority improvement areas include: staff will provide detailed operation instructions, have modern and professional equipment internally, service facilities meet customer needs, and staff can do things right the first time. These four factors are: The item is considered highly valued by customers, but the performance of the W camping area is poor, and the operator should give priority to improvement. In addition, according to Kano analysis, there are 4 efficiency improvement service quality items that can simultaneously increase customer satisfaction and reduce customer dissatisfaction. They are that staff are willing to assist and serve customers, have a bright and clean appearance of facilities, and staff can try their best to assist customers in solving problems. Problems and staff can truly fulfill their commitments to customers. Business operators can continuously improve and maintain good service quality based on these quality items to obtain maximum benefits. The service quality evaluation model of this study can provide other camping areas as a reference for evaluating service quality, avoiding unnecessary waste of resources and fumbling time.

**JEL classification numbers: L10.**

**Keywords :** IPA, Service Quality, Kano Model, Camping Area

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## 1. Introduction

The increasing income level of Taiwanese people has changed people's attitudes and values towards life. People are increasingly paying attention to leisure activities. According to statistics from the Camping Association of the Republic of China, Taiwan's regular camping population has exceeded 2 million. Camping has gradually become a favorite outdoor activity for many people. This study takes the customers of W Camping Area as the research object. W Camping Area is in Tai'an Township, Miaoli County. It is located at a camping site 600 meters above sea level and is surrounded by forests. It provides urban people with a leisure area to relieve the stress of life and has rich features. However, due to the increasing number of camping areas in Taiwan and fierce competition within the industry, how to improve the service quality of camping areas to increase revenue has become an issue that industry operators must pay attention to. In empirical research, there are few studies that combine Importance-Performance Analysis with Kano's two-dimensional quality model to explore its impact on the service quality of camping areas. This study uses Importance-Performance Analysis (Importance-Performance Analysis) and Kano two-dimensional quality model, respectively identify priority service quality improvement items and efficiency improvement service quality items, provide W camping area with improved service quality, and formulate business strategies for future development. Facing competition from the same industry, W Camping Area should find out which of the services provided are valued and satisfied by customers, to improve service quality, formulate a sound business strategy, and increase economic income. This study will take the customers of W camping area as the research object, and apply the IPA importance performance analysis method and Kano two-dimensional model to find out the service quality demand items. The research purposes are as follows:

1. Use the Kano two-dimensional model to explore the service quality of camping operators, what type of service quality customers think they belong to, and find out the efficiency improvement service quality projects.
2. Apply IPA importance performance analysis method to explore customer satisfaction and attention to service quality degree and establish priority service quality improvement items.
3. Identify service quality needs items based on the research results, and provide camping operators with suggestions for business strategies to improve service quality. This service quality needs assessment and improvement can also be used as a reference for other camping areas to avoid unnecessary waste of resources and exploration time, and to achieve maximum results with limited resources.

## 2. Literature Review

The literature review includes three parts, namely the discussion of service quality, Importance-Performance Analysis (IPA) and Kano model.

### 2.1 Service quality

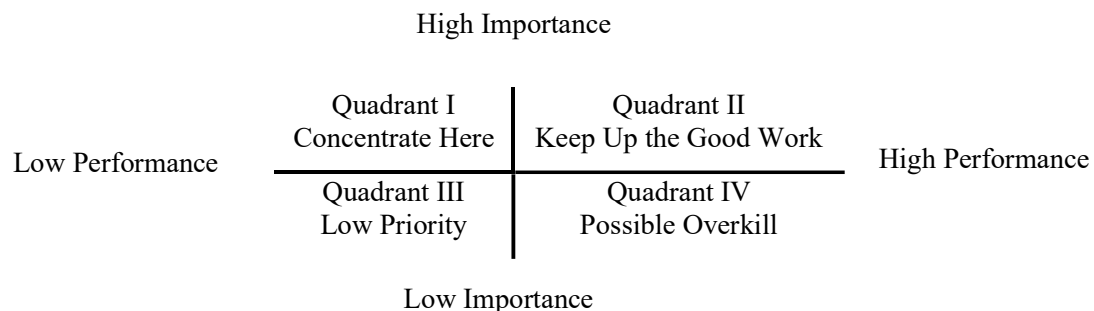
Parasuraman et al. (1988) indicate that service quality can be defined as the customer's judgment of the overall excellence or superiority of a service. Lovelock and Wirtz (2011) regard service quality as an experience and evaluation obtained by customers during the consumption process. Kotler et al. (2009) indicate that a service or product should fit customers' needs, and improve their satisfaction through quality. Wakefield (2001) divides service quality into tangible services and intangible services. Tangible services not only include physical output services, but also include physical facilities, equipment, and personnel appearance, while intangible services refer to service performance, including trust, response, guarantee and empathy. Service quality is considered as the extent to which the needs or expectation of the customers are met with (Rodrigues et al, 2011; Amjad et al., 2013). Parasuraman et al. (1988).

Parasuraman et al. (1994) believe that service quality includes five major aspects, including Reliability; (2) Responsiveness; (3) Reliability; (4) Empathy; (5) Tangible. The measurement items of the five aspects of service quality in this study refer to the questionnaires of Mohsin & Ryan (2005), Phan & Phan (2021), Chung & Chen (2015), Deng & Lee (2007), Parasuraman et al. (1988), for camping areas characteristics have been modified.

## 2.2 Importance-Performance Analysis

Myers (2001) pointed out that the IPA method is a technique that business managers can make good use of. It allows companies to measure their current market positioning and competitive advantages, and improve their business models and future production and marketing strategies. The concept of IPA is to use the overall average of importance and satisfaction level as the separation point of a two-dimensional matrix, with importance as the X-axis and satisfaction as the Y-axis. This two-dimensional matrix is divided into four quadrants, and then divided according to the scores of quality attributes. Its products/services are in four quadrants, further raising strategic considerations for specific attributes (Martilla and James, 1977). Martilla and James (1977), Wu and Shieh (2009), Deng et al., (2008) believe that the IPA analysis matrix diagram divides the plane into four quadrants I, II, III, and IV, as shown in Figure 1

- Quadrant I - concentrate here: It means that the level of importance is high, but the level of satisfaction is low, so the service provider should strengthen improvement.
- Quadrant II- keep up the good work: It means that its importance and performance scores are both high, and it should continue to maintain its improved competitiveness.
- Quadrant III-low priority: This quadrant is where customers pay little attention and have low satisfaction, which is a secondary source of disadvantage for the company.
- Quadrant IV-possible overkill: Represents low emphasis and high satisfaction, allowing resources to be used in areas that need improvement more.



**Figure 1 IPA matrix**

## 2.3 Kano model

Matzler et al. (1996) pointed out that Kano's model provides a better method to understand the customer demands and market differentiation advantages. Kano et al. (1984) developed the Kano two-dimensional quality attributes model, and classified quality factors into five categories according to quality attribute, including attractive quality element, one-dimensional quality element, must-be quality element indifferent quality element (I), and reverse quality element. Matzler and Hinterhuber (1998) classify service quality attributes into six categories, including attractive quality(A), one-dimensional quality(O), must-be quality(M), indifferent quality(I), reverse quality(R), and questionable (Q) types attributes as

listed in Table 1. The Kano Questionnaire is a questionnaire survey to understand customers' cognitive feelings about each quality item when they have it and do not have it. Then Berger et al. (1993) introduced the customer satisfaction coefficient to analyze whether satisfaction can be increased by meeting a customer requirement, or whether fulfilling this requirement prevents the customer from being dissatisfied. The customer satisfaction coefficient which is calculated with the formulas as follows:

$$C(1) : \text{Satisfaction increment index} = (A+O)/(A+O+M+I)$$

$$C(2) : \text{Dissatisfaction decrement index} = (O+M)/(A+O+M+I) \times (-1)$$

A : Attractive quality ; O : One-dimensional quality ; M : Must-be quality ; I : Indifferent quality.

**Table 1: Two-dimensional quality attributes classification**

Functional	Dysfunctional				
	Like	Must-be	Neutral	Live with	Dislike
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

### 3. Methodology

The questionnaires for this study will be distributed from August to September 2023. The respondents will be customers of the W camping area. A total of 75 questionnaires were distributed and 63 valid questionnaires were recovered. The questionnaire is divided into three parts. The first part: customer satisfaction and attention to service quality, including (1) responsiveness; (2) tangibility; (3) reliability; (4) empathy, and (5) assurance. Part 2: It is a Kano questionnaire. Five choices are given for whether the quality items are present or not. The choice results are divided into like, must-be, neutral, live with, and dislike. Part 3: Basic information, including gender, age, education, and occupation. This study uses five aspects such as responsiveness, tangibility, reliability, caring and assurance as the classification of service quality. The items include: (1) Responsiveness: including employees can respond quickly to customer needs (item 1); Employees will not neglect to respond to customers because they are busy (item 2); being able to provide detailed work instructions (item 3); being willing to Assist and serve customers (item 4). (2) Tangible aspects: including staff's neat clothing and appearance (item 5); modern and professional equipment inside (item 6); bright and clean appearance of facilities (item 7); internal facilities, circulation routes and guidance notices Clear (item8); service facilities meet customer needs (item9). (3) Reliability aspect: including staff's ability to try their best to help customers solve problems (item 10); ability to truly fulfill customer commitments (item 11); employees get things done right the first time (item 12); employees can provide reliable service(item13). (4) Empathy aspect: including staff will take the initiative to provide individual care to customers (item14); Employees will give priority to customer interests (item15); employees understand individual customer needs (item16); employees will understand customer needs and provide required services (item17). (5) Assurance aspects: including staff have sufficient expertise to respond to customer issues (item 18); provide services that make customers feel at ease t (item 19); employees can provide responsible service (item 20); employees' behavior makes customers feel confident (item 21). The scoring method of Importance-Performance Analysis adopts the Likert 5-point scale method. The satisfaction and importance in the service quality items are scored according to the answers checked by the subjects. The Kano model scoring method is to

design the service quality items into questions when they are present or not. The answer items are divided into five categories: like, must-be, neutral, live with, and dislike. The research questionnaire was compiled and developed with reference to relevant literature. Before the questionnaire was distributed, interviews were conducted with practitioners to confirm that the semantics could express the original meaning. The content of the questionnaire was then revised to ensure that it had considerable validity. Nunnally (1978) believes that in exploratory research, the reliability range is as long as it reaches above 0.7. From Table 2, it can be found that the Cronbach's  $\alpha$  values of the questionnaires in this study are above 0.7, which shows that the internal consistency of the scale is good.

**Table2: The Cronbach's  $\alpha$  coefficients for all variables in this study**

Questionnaire Dimensions	Cronbach's $\alpha$	
	Satisfaction	Importance
Responsiveness	0.861	0.852
Tangibility	0.830	0.838
Reliability	0.904	0.876
Empathy	0.863	0.812
Assurance	0.891	0.827

#### 4. Study results and analysis

According to the analysis of the questionnaire survey results, among the 63 questionnaires, 28 were male and 35 were female; the age distribution was as follows: 5 people were under 20 years old, 16 people were between 21 and 30 years old, and 21 people were between 31 and 40 years old; There are 15 people between 41 and 50 years old, 4 people between 51 and 60 years old, and 2 people over 60 years old (inclusive). The respondents are mainly concentrated between 21 and 50 years old. The distribution of respondents' academic qualifications and education level are College/university accounted for the most people (43 people), high school vocational students accounted for 5 people, graduate school and above accounted for 11 people, and junior high school (including) and below accounted for 4 people. The respondents were mainly concentrated in college/university. The occupation distribution of the respondents, in order, industry and commerce accounted for the majority with 21 people, followed by service industry with 19 people, military, public and education accounted for 12 people, students accounted for 9 people, and retired people accounted for 2 people. The respondents were concentrated in industry, commerce, and service industry.

##### 4.1 Analysis of importance and satisfaction of service quality

This study applies the Importance-Performance Analysis method to explore the differences in customers' importance and satisfaction with various service attributes, find out the advantages and disadvantages of service quality, and help operators find the direction and priority for improvement. This will improve service quality. In terms of analysis of satisfaction and importance of service quality items, the measurement is based on a Likert 5-point scale. The analysis of the importance and satisfaction of service quality is shown in Table 3. In the IPA analysis, the service items falling in the keep up the good work quadrant (items 1, 2, 4, 8, 10, 11, 17, 18, 20) are the service items that customers regard as highly important and highly satisfactory, which are the advantages of the camping area. location and should

continue to be maintained. items falling in the possible overkill quadrant (items 13, 15, 19, 21) have highly satisfactory but lower customer attention. Business operators should save resources and not invest too much resources to avoid wasting on unnecessary work. Items falling in the low priority quadrant (items 5, 7, 14, 16) are of lower importance and satisfaction to customers than other quality items. These items do not require immediate improvement. There are 4 items falling in the concentrate here quadrant (items 3, 6, 9, and 12), which means that customers attach great importance to these service items, but the service satisfaction provided by the operator is low, and the operator should review and make corrections.

**Table3: Analysis of service quality importance and satisfaction**

Items		Satisfaction	Importance
		Average	Average
1	Employees can respond quickly to customer needs	4.222	4.397
2	Employees will not neglect to respond to customers because they are busy	4.111	4.333
3	Being able to provide detailed work instructions	4.048	4.333
4	Staff are happy to assist and serve customers	4.190	4.413
5	Staff's neat clothing and appearance	3.889	4.143
6	Modern and professional equipment inside	3.603	4.381
7	Bright and clean appearance of facilities	3.841	4.270
8	Internal facilities, circulation routes and guidance notices clear	4.095	4.413
9	Service facilities meet customer needs	3.952	4.365
10	staff's ability to try their best to help customers solve problems	4.222	4.429
11	Ability to truly fulfill customer commitments	4.143	4.444
12	Employees get things done right the first time	3.937	4.397
13	Employees can provide reliable service	4.143	4.238
14	Staff will take the initiative to provide individual care to customers	4	4.206
15	Employees will give priority to customer interests	4.079	4.254
16	Employees understand individual customer needs	3.984	4.190
17	Employees will understand customer needs and provide required services	4.111	4.397
18	Staff have sufficient expertise to respond to customer issues	4.127	4.413
19	Provide services that make customers feel at ease	4.095	4.159
20	Employees can provide responsible service	4.238	4.381
21	Employees' behavior makes customers feel confident	4.143	4.286
Average		4.056	4.326

#### 4.2 Benefit improvement service quality items

This study uses Matzler and Hinterhuber's (1998) calculation method of customer satisfaction coefficient to find a total of 4 efficiency improvement service quality items that can increase customer satisfaction and reduce customer dissatisfaction at the same time. (shown in Table 4). Operators can focus on these quality projects to continuously improve service quality to obtain maximum benefits. In addition, a two-dimensional quality classification was made for the W camping area service quality

items, of which 8 items were classified as attractive qualities; 13 items were classified as one-dimensional qualities (shown in Table 4).

**Table4 : Kano quality attribute classification and customer satisfaction coefficient**

Items	A	O	M	I	R	Q	Classification	C (1)	C (2)
1	18	31	11	3	0	0	O	0.778	-0.667*
2	23	29	3	8	0	0	O	0.825*	-0.508
3	11	34	13	5	0	0	O	0.714	-0.746*
※4	19	34	8	2	0	0	O	0.841*	-0.667*
5	26	23	4	10	0	0	A	0.778	-0.429
6	29	23	5	6	0	0	A	0.825*	-0.444
※7	17	36	5	5	0	0	O	0.841*	-0.651*
8	13	34	11	5	0	0	O	0.746	-0.714*
9	19	30	9	5	0	0	O	0.778	-0.619*
※10	18	37	6	2	0	0	O	0.873*	-0.683*
※11	13	39	8	3	0	0	O	0.825*	-0.746*
12	30	24	5	4	0	0	A	0.857*	-0.460
13	19	31	10	3	0	0	O	0.794	-0.651*
14	34	15	2	11	1	0	A	0.790	-0.274
15	25	23	8	7	0	0	A	0.762	-0.492
16	35	16	2	10	0	0	A	0.810*	-0.286
17	27	24	5	7	0	0	A	0.810*	-0.460
18	28	22	6	7	0	0	A	0.794	-0.444
19	13	37	9	4	0	0	O	0.794	-0.730*
20	16	32	10	5	0	0	O	0.762	-0.667*
21	24	25	8	6	0	0	O	0.778	-0.524
Average								0.799	-0.565

A : Attractive quality ; O : One-dimensional quality ; M : Must-be quality I : Indifferent quality ;

R : Reverse quality ; Q : Questionable

C (1) : Satisfaction increment index =  $(A+O)/(A+O+M+I)$

C (2) : Dissatisfaction decrement index =  $(O+M)/(A+O+M+I) \times (-1)$

\* Denotes absolute value of coefficient > absolute value of mean of total coefficient

※ Indicates efficiency improvement service quality items

## 5. Conclusions and recommendations

The evaluation model of service quality needs in this study can provide other camping areas as a reference for evaluating service quality, avoiding unnecessary waste of resources and exploration time. This study takes customers of W camping area as the research object, and uses Importance-Performance Analysis and Kano two-dimensional quality model to identify priority service quality improvement items and

efficiency improvement service quality items respectively. Provide operators with the opportunity to improve service quality and formulate business strategies for future development. According to the results of the Importance-Performance Analysis, there are 4 items falling in the priority improvement areas, namely, staff will provide detailed operation instructions; the interior has modern and professional equipment; service facilities meet customer needs; work staff can get things done right the first time. Improvement suggestions include (1) staff will provide detailed operation instructions: the operator should strengthen staff improvement in the future and introduce in detail how to park, how to use camping facilities and related regulations: (2) internal Modern and professional equipment: Improvements include providing hot water (water heater) to wash dishes, because mountainous areas are very cold in winter, and providing water dispensers, refrigerators, WiFi and other Internet equipment; (3) Service facilities meet customer needs: Improvement Methods include increasing parking spaces and welfare clubs, and providing items needed by customers; (4) staff can do things right the first time: The improvement method is to increase education and training for employees to become familiar with various operating processes and methods. . In addition, this study found that there are 4 efficiency improvement service quality items that can simultaneously increase customer satisfaction and reduce customer dissatisfaction. They are staff who are willing to assist and serve customers, a bright and clean appearance of the facility, and staff who can try their best to assist. Customers can solve problems and staff can truly fulfill their commitments to customers. Business operators must continue to maintain good service quality for these efficiency and quality projects to obtain maximum benefits.

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