Research on Innovative Improvement of Hotel Catering Service Quality Based on Multifactor Data Analysis

------Taking Zhejiang Jinhua Marriott Hotel as an Example

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Abstract. Hotel catering reflects the level of the hotel and is also the main source of revenue for the hotel. In the new era, people's pursuit of a better life has promoted the upgrading of consumption quality. In order to maintain and expand market share, it is imperative for hotel catering to achieve high-quality and sustainable improvement. This article takes the catering department of Zhejiang Jinhua Marriott Hotel as the research object. From multiple perspectives such as hotel grassroots employees, hotel management personnel, and hotel mobile customers, questionnaire and interview methods, SPSS and ROST CM6 software tools are used to objectively analyze a large amount of text interview data, and it is found that hotel catering has a single dish and insufficient characteristics; The dining environment has a low matching degree with the hotel grade; Low employee's satisfaction results in low service levels; The key to addressing these issues is to continuously innovate dishes, improve dining environment as conditions, enhance employee satisfaction and maintain service quality as the core, and increase the proportion of loyal customers as a breakthrough.

Keywords: Marriott Hotel; Hotel catering; Multi factor data; Current situation; countermeasure.

1 Introduction

Hotel catering is not only an important component of the local catering industry, but also a major channel for high star hotels to implement localized development strategies and expand revenue. The work of catering management often faces many complex problems. In order to achieve targeted management within the hotel, it is necessary to develop corresponding management plans with scientific and reasonable functions, and at the same time, put forward targeted requirements for hotel catering operation and management activities[1], in order to enhance the competitiveness of hotel catering in the market. Many high-end and well-known brand hotels, facing the market recovery after the epidemic, need to continuously explore the path of transformation and reform, and continuously enhance their service capabilities to meet the challenges of the

times[2]. The continuous improvement of hotel enterprises has also promoted the sustainable and high-quality development of China's accommodation industry.

2   Overview of research points

Jinhua Marriott Hotel is the first five-star hotel opened by the International Marriott Hotel Group in Jinhua City, Zhejiang Province. It is located in the Duohu Central Business District of Jinhua City and has 288 rooms. The hotel's catering department mainly consists of three parts, namely the 27th floor Zhen Chef full-time restaurant (Western restaurant), the 6th floor Chinese restaurant, and the 5th floor banquet hall. The Zhen Chef Full Day Restaurant is located on the 27th floor of the hotel, equipped with a fully open kitchen and a clearly partitioned buffet counter, offering local traditional and specialty dishes. The hotel also includes a lobby bar on the 27th floor, providing a resting place for guests who check in. It is free for guests receiving administrative treatment; The Chinese restaurant on the 6th floor consists of two parts: the lobby and private rooms. The Chinese restaurant specializes in creative Jiangnan fusion dishes, authentic Cantonese cuisine, and local specialties in Jinhua, such as Jinhua's signature two headed black croaker. Various local specialties have also been introduced, such as Beijing roast duck, Longxu Guiyu shredded fish, and sand pot three onion baked fish head. In addition, the Chinese restaurant has eight elegant private rooms; The 5th floor banquet hall includes a large banquet hall (Eight Odes Hall) and a small banquet hall (Wuzhou Hall), five multifunctional halls, and a board meeting room. The large banquet hall (Eight Odes Hall) can accommodate 450 people for dining, the small banquet hall (Wuzhou Hall) can accommodate 250 people for dining, the multifunctional hall 1 can accommodate 100 people for dining, and the multifunctional halls 2, 3, 5, and 6 can accommodate 80 people for dining; The catering department can accommodate more than 1300 people dining at the same time. The hotel's catering department has a total of 21 people, as shown in Figure 1. The Western restaurant is not open to the public during the week, and personnel can meet normal operations. There is a high demand for weekend meals, and there is a shortage of manpower. The hotel needs to recruit a large number of hourly workers to meet the employment needs.
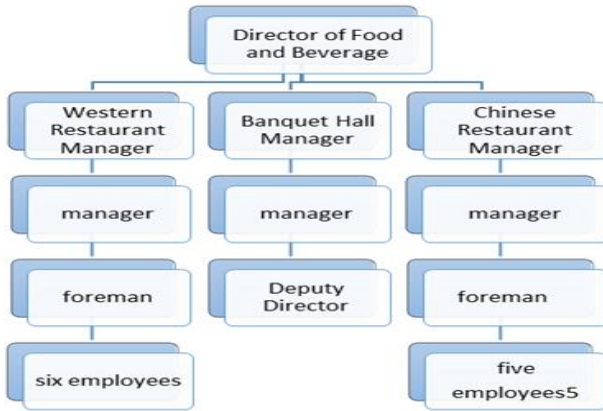
Fig. 1. Organizational Structure of the Catering Department

3   Data collection and analysis

In order to better understand the operating status of the hotel's catering industry, a customer evaluation index system was constructed through literature review, and a survey questionnaire was formed. From January to March 2023, 200 questionnaires were distributed online and offline in the hotel, 196 valid questionnaires were collected, with an effective rate of 98%. The survey questionnaire is mainly aimed at customers and is divided into two parts. The first part is demographic information, including age, gender, annual income situation, and customer source. The second part is to understand consumer evaluations of hotel catering products, which are evaluated from six dimensions: food quality, dining environment, price, service personnel, after-sales, and management. The Likert five level scale is used, divided into very satisfied, satisfied, average, dissatisfied, and very dissatisfied, The corresponding number is1, 2, 3, 4, 5.

3.1   Reliability and validity analysis

Through SPSS software analysis, the cloned Bach in this study is 0.869, indicating that the questionnaire question design is reasonable and can be used. The results of Bartlett's test showed a p-value of 0.000<0.05, which was significant, indicating good validity of the questionnaire. This indicates that data extraction can be carried out for further analysis.

3.2   Customer profiling analysis

The purpose of descriptive analysis is to accurately understand the composition of hotel catering customers.

Table 1. Statistical Table of Demographic Characteristics of Samples

project		frequent and continuous	(%)
gender	male	89	45.4%
	female	107	54.6%
age	18«	0	0%
	19~30	75	38.3%
	31~40	64	32.7%
	41~55	41	20.9%
	56»	16	8.2%
annual income	10000«	1	0.5%
	10001~60000	73	37.2%
	60001~100000	77	39.3%
	100001»	45	23%
from	local	58	29.6%
	Inside province	44	22.4%
	Outside province	94	48%
Average consumption	800«	43	21.94%
	801~2400	66	33.67%
	2401~5000	42	21.43%
	5001 ~10000	28	14.29%
	10001»	17	8.67%

As shown in Table 1,The males accounted for 45.4% and females accounted for 54.6%, with more female customers than males; In terms of age, It can be seen that the 18-30 age group has the largest proportion, indicating that young people are the main consumers of the hotel's catering industry; In terms of annual income, the highest proportion is 60000 to 100000 Yuan, accounting for 39.3%, indicating that customers who come to the hotel for dining have a higher annual income; From the perspective of urban sources, the region outside Zhejiang Province has the highest proportion, accounting for 48%, indicating that there are more dining guests from outside the province, The group with the highest secondary consumption is 800-2400 Yuan, accounting for 33.67%, indicates that the moderate consumer group is the main body of hotel catering.

3.2.1 Customer perception analysis.

Through data analysis, as shown in Table 2, the highest level of customer satisfaction is with the prices of hotel catering, while the most unsatisfactory is with the hotel's food.

Table 2. Statistical Table of Hotel Catering Evaluation

questions	variable				
	best	satisfied,	normal	dissatisfied	worse
Dining environment	36.2%	33.2%	16.3%	7.7%	6.6%
Meals	34.7%	41.8%	7.7%	6.6%	9.2%
price	38.3%	33.2%	14.8%	6.6%	7.1%
service staff	34.2%	41.8%	10.7%	9.2%	4.1%
After Sales	32.1%	39.3%	13.3%	9.7%	5.6%
management	36.7%	36.2%	13.8%	9.2%	4.1%

In order to better understand the real thoughts of customers on catering services, We design a question "Do you want to receive exceptional service" for evaluation. As shown in Table 3, 31.6% of customers hope to receive standardized services, and 39.8% of customers hope that the services can have a sense of freshness. From this, it can be seen that most customers still hope to receive value-added services and achieve emotional value.

Table 3. Statistical Table for Obtaining Extraordinary Service Data

option	frequency	percent	Effective
yes	62	31.6%	31.6%
no	78	39.8%	39.8%
indifferent	56	28.6%	28.6%

3.2.2 Analysis of hotel's customer acquisition ability.

Multiple response analysis aims to understand the hotel's customer acquisition situation, clarify the reasons why customers dine at the hotel and the channels for obtaining hotel catering information.

Table 4. Frequency statistics of dining reasons

		response		
	number		percent	Case percentage
	A(social)	56	11.6%	28.6%
	B(brand)	111	23.1%	56.6%
	C (Internet celebrity)	108	22.5%	55.1%
reason	D(convenient)	99	20.6%	50.5%
	E(service consciousness)	68	14.1%	34.7%
	F(Dining environment)	24	5.0%	12.2%
	G(other)	15	3.1%	7.7%
	total	481	100.0%	245.4%

According to Table 4, it can be seen that the advantage of hotel catering is brand effect, accounting for 23.1%, especially with the significant influence of internationally renowned hotel brand groups. However, the dining environment is not satisfactory and no attraction has been formed.

Table 5. Statistical Table of Channel Frequency for Understanding Hotel Catering Information

		response		
		number	percent	Case
channel	A(recommend)	73	15.5%	37.2%
	B(Media)	126	26.8%	64.3%
	C(website)	113	24.0%	57.7%
	D(ad.)	112	23.8%	57.1%
	E(other)	46	9.8%	23.5%
total		470	100.0%	239.8%

As can be seen from Table 5, the consumption behavior of young consumer groups is characterized by a high dependence on the Internet. Most customers learn about the catering information of Marriott Hotel through Meituan, Tiktok, Kwai and Xiaohongshu, which shows that the hotel group has good digital marketing effect, large customer volume and digital marketing advantages. However, the proportion of guests recommended by friends to come to the hotel for dining consumption is only 15.5%, indicating that the customer driving effect is limited, the proportion of loyal customers is relatively small, and the efficiency of developing loyal or even sticky customers is insufficient.

3.3   Interview Text Analysis

3.3.1 The analysis of Customer suggestion.

(1)Word frequency

Based on the open-ended question "Your suggestions for hotel catering", 41 customers received their suggestions. ROST CM6 software was used to analyze their word frequency, and it was found that the word "service" received the most attention. Combined with the data, it can be seen that the majority of customers were not very satisfied with the hotel catering service.

Table 6. Top 10 high-frequency feature words list

list	word	frequency
1	service	13
2	waiter	10
3	loge	8
4	canteen	6
5	advice	5
6	table	4
7	dishes	3
8	vessel	3
9	communicate	2
10	Inconsistent quality and price	2

According to Table 6, the top feature words are: service (13), waiter (10), private room (8), reflecting the customer's focus on service level and waiter.
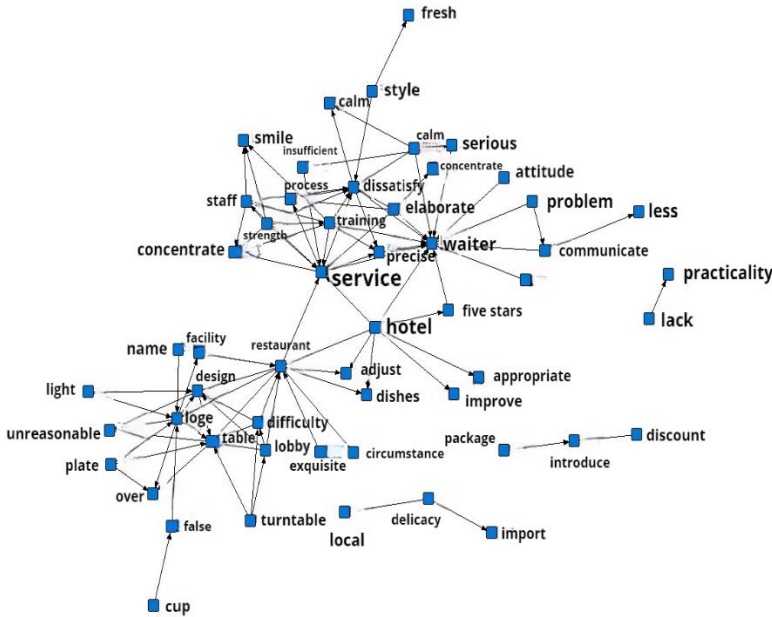
(2) Semantic network analysis

Fig. 2. Semantic Analyses of Customer Suggestions

In order to more directly represent the connections between high-frequency words, ROST CM6 software is used to perform network semantic analysis on customer suggestions. In Fig.2, nodes are used to represent high-frequency words, and the more nodes appear, the more high-frequency words there are. The connection between high-frequency words indicates the frequency at which high-frequency words coexist, and the shorter the connection line, the closer the relationship. In the semantic network graph that collects customer suggestions, there are many nodes such as servers, service, restaurant, design, insufficient, table, in place, and private rooms. The service provided by servers is insufficient, and limited training affects service quality. The design of private rooms and tables are the main indicators for evaluating the restaurant environment.

3.3.2 Interview employee.

Interview hotel employees with 9 questions: "Do you think your abilities can be fully demonstrated in hotel catering work?" "Do you think the effort and reward in work are proportional?" "Are you satisfied with the hotel's salary?" "Can you accept the workload of hotel catering?" "Do you think there is a lot of room for promotion in hotel catering?" "Can the hotel solve any difficulties you encounter in your work in a timely manner?" "Do you think the relationship between hotel employees is harmonious?" "Are you satisfied with the accommodation provided by the hotel?" "Do you think the

employee's catering is good?" Fifteen hotel catering employees were randomly selected and word frequency analysis and semantic network analysis were conducted on the interview content using ROST CM6 software.

(1)Word frequency

Table 7. Statistical Table of the Top 7 High Frequency Feature Words

list	Frequency	number
1	hotel	25
2	salary	14
3	hardness	13
4	maintain	11
5	relationship	10
6	promotion	10
7	employees	7
8	Catering	8

According to Table7, the interviewed employees talked the most about the hotel's salary system, followed by various personal difficulties involved

(2)Semantic Network Division

Fig. 3. Semantic Analyses of Interviews with Hotel Catering Employees

From Figure 3, it can be seen that generally low educational qualifications affect promotion, hinder the expected salary, affect employee work enthusiasm, and the level of interpersonal harmony also affects their work efficiency. They can only maintain their work status, with low employee satisfaction, lack of happiness, and many difficulties discussed, thereby affecting the quality of customer service.

4   Improvement measures

Based on the above analysis, problem oriented strategies are proposed:

4.1   Innovative hotel catering categories

The hotel catering department needs to put more effort into the dishes, innovate according to a certain time rhythm, establish strategic alliances with the local snack industry, provide customers with more choices for meals, and make up for the lack of regional characteristics in hotel catering; Further develop the mid to high end customer market, launch private customized meals, and create exclusive dishes and themed meals for customers based on their needs and preferences; Adapt to the fast-paced lifestyle needs, develop nutritious and hygienic pre made dishes, and expand the local customer market. At the same time, based on the advantages of the hotel, theme activities can be designed, and regular activities such as food appreciation and new dish promotion can be organized to invite customers to participate, providing customers with the latest meal experience services, increasing customer recognition and loyalty to the hotel, continuing to maintain and expand the membership team, using members to drive new members, and continuously increasing the proportion of loyal customers.

4.2   Improve hotel dining environment

Hotel catering has inherent geographical advantages and spacious and bright dining spaces. It is necessary to improve the maintenance system of hotel facilities and equipment to ensure their convenience and intelligence. Elegant decoration, comfortable seats, and lighting configuration can increase the comfort of dining, create a pleasant dining experience, and encourage customers to choose and continue to visit; Emphasizing the improvement of restaurant aesthetic design, customers' impression of the hotel restaurant not only comes from the taste of the food, but also includes a ceremonial atmosphere. Emphasizing the beautification design of material colors in the dining environment has a positive effect on improving retention rate.

4.3   Improve employee satisfaction

The difficulty in maintaining the level of hotel catering service is related to a large number of temporary employees taking up temporary positions and low satisfaction employees losing their work enthusiasm when there is a shortage of employment. To improve the service quality of staff, two aspects should be taken into consideration: on the one hand, middle and senior management personnel should establish the concept of "no satisfied employees, no satisfied customers", carry out various management work, have a human touch, pay more attention to employee life, solve their worries, and effectively improve employee satisfaction and happiness; Establish a more scientific system of rewards, punishments, and compensation, which is fair and just. Pay attention to the level of human-machine relationship and harmony among employees, in-

crease their integration and participation through equity participation and other means, form a community with a shared future with the hotel, increase their sense of belonging and security, regularly conduct technical competitions and education and training, make them realize that their work is valuable and meaningful, and enable employees to find joy and pride in their work [3]. Improve their job skills, stimulate their proactive service awareness, and proactive and enthusiastic employees can ensure the quality and level of customer service.

4.4   Expand viscosity customer base

On the basis of consolidating the advantages of digital marketing, hotel catering also needs to take advantage of the situation, interpret traffic passwords, adapt to new changes in consumption methods, not only gain customer groups through traffic, but also turn customer groups into "retention" economies, focus on consumer experience, maintain customer relationships, increase customer trust and dependence, increase the proportion of "first time customers" becoming "repeat customers", and focus on developing loyal customers, And stabilize and expand the market through the customer's own promotion and drive, reducing the cost of enterprise promotion and marketing.

5   Conclusion

The following are suggested perspectives to be considered for tourism and hospitality curricula development (Ring et al. 2009, Atef and Al-Balushi 2017): [4].In summary, well-known brand hotels and restaurants rely on brand effects, membership systems, and customer advantages to highlight their advantages. With the help of group management, digital marketing has low costs and good effects, and inherent advantages. Exploring new phenomena that arise in practice.[5] However, in the process of catering to customers, there is a lack of innovation in dishes, a lack of emphasis on improving the dining environment, low attention to employees in management, which makes it difficult to maintain a high level of service quality, affects customer experience, and low customer loyalty, The breakthrough of hotel catering lies in maintaining advantages, emphasizing the management of the middle and back ends, and clarifying the importance of integrity and innovation. The innovation of hotel catering products is the core, the environment is the condition, and personnel are the guarantee. The synergy of the three can ensure the high-quality development of hotel catering and bring brand value-added effects to the hotel.

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