

Key Indicators for Successful E-oriented Operation and Management of the Nutrition Consulting Service System

Ling-Mei Hsu

*The Ph.D. Program in Business and Operations Management, College of Management,
Chang Jung Christian University,
No. 1, Changda Rd., Gueiren District, Tainan City, 711301, Taiwan
E-mail: lianyingtw@yahoo.com.tw*

Abstract

According to the application theory of information systems, it is a tendency that the e-management of the nutrition consulting service industry by the Internet generation, and service quality is the key indicator of operational performance, which is of great importance. This research purpose was to analyze the key dimensions of online service quality when customers were learning online. This research used the E-SERVQUAL to design five major dimensions and 15 criteria, and through the analytic hierarchy process (AHP) constructed a set of successful operation management modules. This research verified the order of the key indicators were: Security/Privacy, Reliability, Reactivity, Efficiency, Tangibility.

Keywords: E-SERVQUAL, Nutrition Consulting, Analytic hierarchy process (AHP)

1. Introduction

With economic prosperity, human life styles around the world are facing unprecedented changes. The prevalence of obesity in countries around the world is becoming more and more serious. Data from the World Health Organization show that more than 1.9 billion adults worldwide are overweight, and about 13% of the population is obese [1]. The World Obesity Federation predicts that the world's overweight population will rise from 2 billion in 2014 to 2.7 billion in 2025 [2]. At present, obesity seriously affects people's health in Taiwan. According to the National Nutrition and Health Status Change Survey, the weight of nearly 40% of adults in Taiwan is in the high-risk range [3]. Therefore, obesity prevention and control must be vigorously promoted and everyone should face the health problems caused by obesity and actively prevent and treat the chronic complications caused by obesity, so as to consolidate public health. The nutrition consultation agency is the most ideal professional medical unit to help control weight, keep health, and improve chronic diseases [4]. It makes a tangible contribution to safeguarding public.

Enterprise operation requires considerable professional knowledge. The nutritional consulting and medical industry is classified as the preventive medicine health industry in accordance with the regulations of the Ministry of Health and Welfare of the Executive Yuan of Taiwan [4]. However, nutrition consulting and medical work mainly requires service quality in addition to nutrition medicine specialty, and thus, it is extremely necessary to have the ability of business management and the quality of customer service to operate it continuously. In the 21st century, according to the application theory of information systems, it is indispensable to use advanced information technology to manage their business activities and promote the growth of corporate organizations due to the fierce competition and service quality requirements in the business environment [5,6]. In response to the situation, the improvement of e-service quality of nutrition consulting agencies is an important element of business success in the nutrition consulting industry in the modern society. According to this, the key aspects and criteria of e-service quality are to conduct sound management and meet customer service quality for nutrition consulting agency operators and related demands, competitiveness enhancement and profitability creation are indispensable

and important indicators [6,7].

The main purpose of this research is to: (1) conduct questionnaires and expert interviews through relevant service quality literature on the website, and then develop a measurement framework suitable for the nutrition consulting and medical industry to evaluate the quality of online services; (2) explore the key aspects and criteria for the quality of online services, and discuss its service performance to provide a reference for sustainable operation in the nutrition consulting industry.

2. Literature Review

2.1. Nutrition consultation

According to the definition of nutrition counseling proposed by Katharine R. Curry and Amy Jaffe [8]: "Nutrition counseling is to give dietary guidance to healthy people or diseased patients, plan to make the diet meet the nutritional needs on each stage of growth, or modify the treatment to adapt to the disease. Solving the difficulties encountered in diet changes is to achieve the principle of a balanced diet and obtain a proper establishment of a healthy lifestyle".

2.2. E-Service Quality

Zeithaml et al. [9] believe that the quality of website services can be regarded as the degree to which the website promotes efficient and effective shopping and product or service delivery, this study defines website service quality as "the website service provider delivers services to customers through the special environment of "website," and the customer's overall evaluation of the service."

In the past researches on measuring service quality, most of them were based on the service quality measurement model SERVQUAL proposed by Parasuraman et al. [10]. Zeithaml et al. [9] propose a conceptual framework for online service quality and 11 aspects to measure website service quality. Later, in 2002, the online service quality dimension and conceptual framework proposed in 2000 were revised in 2002, and seven dimensions were proposed, which would indeed affect online service quality. Among them, efficiency, reliability, fulfillment, and privacy form the E-SERVQUAL scale, which mainly measures customer satisfaction with the online functions provided by the website. In addition, the recovery E-SERVQUAL scale consists of responsiveness, compensation and contact, which is mainly used for the services that customers hope to get when they have

questions or encounter trouble [11]. Based on the views of VIP customers of nutrition consulting organizations, the study cited the five aspects of the online service quality E-SERVQUAL scale proposed by scholar Zeithaml et al. [11], 15 suitable evaluation criteria are selected, as shown in Table 1.

Table 1. Key Indicators of E-SQ Success of Nutrition Organizations

Dimensions	No.	Indicators
Tangibility	A1	The teaching material is clear.
	A2	The course content is updated instantly.
	A3	The information is complete.
Reliability	B1	Professional consultation process.
	B2	The nutritionist has sufficient professional training.
	B3	Effective online consultation.
Security/Privacy	C1	Safe nutritional guidance.
	C2	Helpful performance improvement.
	C3	Safe transaction system provision.
Reactivity	D1	Kindly online service attitude.
	D2	Quick customer question reply.
	D3	Immediate services.
Efficiency	E1	Quick benefits on online consultation.
	E2	Simple online consultation.
	E3	Online consultation saves traffic time.

3. Research Methods

In this study, AHP is adopted as a research method to explore the key factors for the success of E-service quality management in a nutrition consulting organization. Through a systematic level, the complex website service quality evaluation system is transformed into a clear framework, and the scale of one to nine is compared. For the weights between the evaluation criteria, we establish a paired comparison matrix, calculate its eigenvalues and eigenvectors, and finally use the largest feature to perform a consistency test to obtain the relative weights between the evaluation criteria. In this study, such method, one of the most effective methods for cohesive judgment, is applied to obtain the E-service quality of the nutrition consulting agency, the relative weight of each aspect and each factor, and pairwise comparison [12]. Through the hierarchical process analysis method, an expert questionnaire is made to interview VIP customers of nutrition consulting agencies, and the order of weight for the quality of online services is ranked.

4. Empirical Analysis

4.1. Questionnaire design and data collection

This research is based on the perspective of "VIP consumer customers" to conduct a study on the "key success factors of E-service quality of nutrition consulting organizations." A total of 20 questionnaires were issued, with 17 valid questionnaires, including six males and eleven females. The questionnaires are all VIP customers of the nutrition consulting agency, and three copies of the questionnaire data collected are deleted. Because the values of CI and CR values are not less than or equal to the standard 0.1, the remaining 17 copies are consistent, so they are included.

4.2. Research results

In this study, the collected VIP customer questionnaires are calculated with Microsoft Excel to obtain the weights of each evaluation dimension and each evaluation element and rank them separately, and the weights of each level are shown in Table 2.

Table 2. Overall evaluation results of key elements of E-SQ of nutrition consulting agencies

Dimension	Factor weight (A)	Indicator factor weight (B)	Integration weight (C) = (A)*(B)
Tangibility	0.1584 (5)	A1 0.3203 (2)	0.0507 (11)
		A2 0.2754 (3)	0.0870 (13)
		A3 0.4043 (1)	0.0461 (8)
Reliability	0.2155 (2)	B1 0.3734 (2)	0.0805 (5)
		B2 0.3984 (1)	0.1017 (3)
		B3 0.2282 (3)	0.0937 (12)
Security/ Privacy	0.2566 (1)	C1 0.4231 (1)	0.1086 (1)
		C2 0.3215 (2)	0.0825 (4)
		C3 0.2554 (3)	0.0655 (6)
Reactivity	0.2034 (3)	D1 0.3106 (2)	0.0632 (9)
		D2 0.4787 (1)	0.0974 (2)
		D3 0.2107 (3)	0.0429 (14)
Efficiency	0.1661 (4)	E1 0.3833 (1)	0.0637 (7)
		E2 0.3629 (2)	0.0603 (10)
		E3 0.2538 (3)	0.0422 (15)

Note: The brackets after the weight numbers are sorting.

This research refers to the number of key success factors proposed by Daniel [13]. He believes that many industries have two to six key factors that determine whether they can succeed. Therefore, the results of this study integrate the weight ranking, the e-service quality of nutrition consulting agencies, and the six most important success factors, shown as follows.

- (1) C1 Safe nutritional guidance.
- (2) D2 Quick customer question reply.
- (3) B2 The nutritionist has sufficient professional training.
- (4) C2 Helpful performance improvement.
- (5) B1 Professional consultation process.
- (6) C3 Safe transaction system provision.

4.3. Discussion for six key success factors

4.3.1 Nutritional institutions can provide safe guidance
Nutrition consulting agencies belong to the service of the medical system. Therefore, the customers seeking for assistance mostly want to improve obesity problems, chronic diseases, and other requirements. Therefore, the quality of the nutritionist online service is available, which is the primary key factor for the success of the nutrition consulting agency.

4.3.2 Institutional nutritionists can quickly answer customer questions

Customers can get answers immediately when they encounter problems about online services.

The adaptability of nutritionists and their ability to provide customer trust can assist customers as soon as possible when they encounter difficulties, provide quick service with immediate answers, and make customers feel safe and valued, which is the key to the successful development of E-service quality of nutrition consulting agencies.

4.3.3 Institutional nutritionists have sufficient professional knowledge

Nutritionists have professional knowledge and abilities. Professional knowledge and ability can provide customers with specific and effective online professional plans to achieve the best results of professional plans. In this way, the ability to build customer trust becomes the third important factor for the success of nutrition consulting E-service quality management.

4.3.4 Online service consultation values customer privacy
During the online service of the dietitian, the privacy of the individual case will not be leaked to the third party, and the personal information and privacy of the individual will be protected. The promise of confidentiality can be fulfilled. This is the fourth key success factor in the development of E-service quality for nutrition consulting organizations.

4.3.5 Institutional nutritionist can provide a professional consultation process

The process of consulting services provided by nutrition institutions is crucial to the success of professional programs. Therefore, correct and professional information transmission is very important. This is the fifth key factor for the success of nutrition consulting organizations in developing E-service quality.

4.3.6 The institution provides an online secure transaction system

The organization has a complete online credit card or

payment system to allow consumers to have a safe transaction method and guarantee during the payment process. This is the sixth focus of the nutrition consulting organization's success in developing E-service quality.

5. Conclusions and Recommendations

5.1. Conclusions

In this study, it is believed that exploring the e-service quality viewpoints provided by VIP customers of the nutrition consulting agencies will help the management and sustainable development of the nutrition consulting and medical industry.

The main findings of this research are as below.

E-service quality of the nutrition consulting agencies in this study is important for the evaluation of the key success factors. In terms of evaluation aspects, "security/privacy" is the most important aspect considered by customers; the second is "reliability"; the third is "reactivity"; the fourth is "efficiency"; and "tangibility" is considered to be less influential.

The adaptability of nutritionists and their ability to provide customer trust can assist customers as soon as possible when they encounter difficulties, provide quick service with immediate answers, and make customers feel safe and valued, which is the key to the successful development of E-service quality of nutrition consulting agencies.

5.2. Management Implications and Recommendations

5.2.1. Recommendations to the government

Nutrition consultation is the front-end of preventive medicine. It can be used as the "promoter of preventive medicine and the patron saint of human health." It is recommended that the government pay attention to the function of nutrition consultation and diet care, establish an e-policy and training plan for nutrition consultation, and support the network of the nutrition consultation industry. At the same time, it is recommended to inject the energy of academic research to promote the enhancement of industrial talents' E-level ability, strengthen E-level service quality, online operation management, marketing strategy, and other professional skills, so that the nutrition consulting industry can contribute the most outstanding force in Taiwan's health promotion industry.

5.2.2. Suggestions for the nutrition consulting industry

Business operators should focus on the professional training of nutrition professionals, strengthen professional

training on a regular basis, improve the professional knowledge and service quality of nutritionists, and provide customers with online trust and a sense of security, so that professional competence can have the best competition advantage. The growth and advancement of nutritionists in knowledge or intelligence is the best driving force for nutrition consulting companies in their operations. Only with excellent nutritionists and sufficient professionals can nutrition consulting companies create opportunities for sustainable operation.

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Authors Introduction

Ms. Ling-Mei Hsu



She received her Master's degree from the IEMBA, National Kaohsiung University, Taiwan in 2010. She is currently a Doctoral course student in Chang Jung Christian University, Taiwan. She is a person in charge of Xianghe Nutrition Consulting Agency.