

FUNCTIONAL AND TECHNICAL QUALITY - ONE AND SAME QUALITY?

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Abstract: This article presents the "Determinants - Structure" Conformity Experiment, which attempts to analyze technical and functional quality. The goal is to measure the functional quality and to present a new aspect of its nature.

Hypothetically an overlay is allowed, designing the determinants of the SERVQUAL methodology on each element of the organization. It is found that each determinant is "responsible" for measuring a certain type of relationship in the internal environment of the organization or between the organization and the external environment. SERVQUAL determinants are dual in nature - they are both criteria and factors of quality at the same time, and a value that must be available throughout the entire production of the product / service.

At the level of the production process and the level of service provision, both qualities - functional and technical - are aligned. They have to be considered as one, because the transformation of resources could not be done without a structure, respectively - adding value.

Keywords: nature of quality, SERVQUAL methodology, functional quality, technical quality, added value.

ФУНКЦИОНАЛНОТО И ТЕХНИЧЕСКОТО КАЧЕСТВО –ЕДНО И СЪЩО КАЧЕСТВО?

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Резюме: Тази статия представя експериментът „Съответствие „Детерминанти – Структура“, чрез който се прави опит за анализ на техническото и функционалното качество. Целта е да измери функционалното качество и да представи нов аспект от неговата природа.

Хипотетично се допуска наслагване, проектиране на детерминантите от методиката SERVQUAL върху всеки един елемент на организацията. Установява се, че всяка една детерминанта е „отговорна“ за измерването на определен тип отношения във вътрешната среда на организацията или между организацията и външната среда. Детерминантите от модела SERVQUAL проявяват двойна природа – те са критерии и фактори на качеството едновременно, и ценност, която трябва да е налична през цялото време на производство на продукт/услугата.

На нивото на производствения процес и на нивото на предоставяне на услугата, двете качества - функционалното и техническото, се изравняват. Те трябва да се разглеждат като едно цяло, защото трансформацията на ресурсите не би могла да се осъществи без структура, съответно - да се добави стойност.

Ключови думи: природа на качеството, методика SERVQUAL, функционално качество, техническо качество, добавена стойност.

INTRODUCTION

In the 21st century, the market has reached the limits of its ability to regulate the productivity of production through market forces. The development of science and technology, business process management, equalize market forces, resulting in increased competition, small product differentiation, continuous growth and alignment of sales of services. Market constraints require a quest for change - shifting focus to consumers.

Measuring consumer satisfaction, in turn, raises the question of the nature of the service at all.

The aim of this article is to measure the functional quality and to present a new aspect of its nature

1. NATURE AND STRUCTURE OF THE SERVICE

The Consumer Satisfaction Concept defines satisfaction as: "The state of consumer consciousness about the company when their expectations were met or exceeded over the product or service lifecycle" [6].

It follows from the definition that consumer satisfaction is a subjectively non-numerical state of measurement, and a clear picture of the "rift" between consumer expectations and perception of performance characteristics, as well as a link between consumer satisfaction and key outcomes. The implementation of this definition focuses on the most applicable modern concepts of service quality and its measurement tools - Grönroos concept and Parasuraman, Zeithaml and Berry's "ideal" service (1985)

The concept of Gronoros presents the essence of the service, consisting of two qualities: technical quality - the key benefit to the consumer or what the users receive or the technical result of the process and the functional quality - the quality of the process or how consumers receive the technical result called Grononos "presentation of the service" (Figure 1). Gronoros assumes that the service is delivered at a satisfactory technical level as well as that the measurement of functional quality is perceived subjectively. It suggests that in the context of service, functional quality is perceived by the user as more important than technical [1, 10].

The evaluation of the two types of quality is influenced by the level and the ability of a qualified rating on the part of the user, the "key" benefit of the product and the degree of contact between him / herself and the service provider. Thus, poor assessment capability and high contact emphasize the quality of the process (Figure 1).

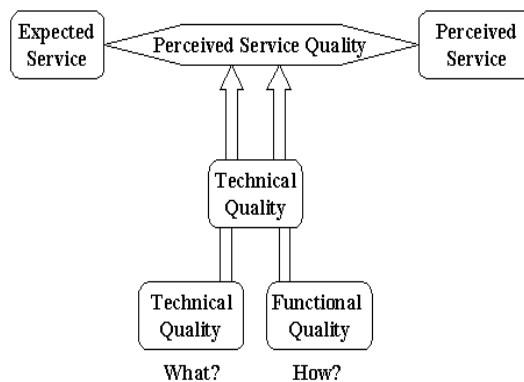


Fig. 1 Gronóros concept for the essence of the service, Source: Grönroos (1984b, p. 40)

By analogy, where the health service is highly specialized and patient information is low, the weight of the assessment should shift to a greater extent to the functional quality, ie. to the patient's contact with the hospital.

Exploring the "Service Expected - Service Received" link, Gronoros proves the existence of a rift between consumer expectations and what they actually get. The service received is marked as an experience the user receives at the time of delivery of the service. The rift is determined by various factors influencing expectations and experience. Expectations are a function of market communications, word of mouth, consumer needs, consumer science, and the image of the vendor, while the experience is a product of technical (what) and functional (how) quality that are filtered (bounce) through and the image of provider (who) [11].

2. IDEAL SERVICE MODEL AND EXPERIENCE FOR MEASURING FUNCTIONAL AND TECHNICAL QUALITY

It is generally accepted that the SERVQUAL methodology is designed solely to measure functional quality. It was created as a model of the "ideal" service by Parasuraman, Zeithaml and Berry (1985), with five dimensions (determinants / criteria): tangibles, reliability, responsiveness, assurance Empathy [5].

The SERVQUAL methodology implies measuring service quality using the SQI (Quality Quality Index) quantitative indicator, which reflects the perceived quality / service quality ratio. The quality index is based on the results of the user survey of the service. Two basic surveys are used: to measure consumer expectations and perceptions of quality. Respondents answer the questions with the help of Lemker's seamical rock "Absolutely disagree" - "Absolutely agree". The high quality of the service provided corresponds to the non-negative significance of the SQI (the perceived quality of the service received is assessed not lower than expected) [3].

In the empirical studies of some organizations to adapt the scale from the SERVQUAL methodology to the hospital environment it was found that functional quality can not be maintained without accurate diagnoses and

procedures, without technical quality [5]. This casts doubt on the possibility of the methodology as a measure of the functional quality only and imposes **the question:**

"Is it possible, through the determinants of the SERVQUAL methodology, to measure the two types of quality according to the Gronhoros model - the functional and the technical"?

3. EXPERIMENT "COMPLIANCE" DETERMINANTS - STRUCTURE "

Through the "Determinants - Structure" Conformity Experiment, an attempt is made to assess the technical and functional quality. The design of the experiment consists in hypothetically allowing the comparison (designing or overlaying) of any determinant of the SERVQUAL methodology on an element of the organization. Figure 2 presents the relationship between the determinants of the SERVQUAL methodology and the elements of the organization, the correspondence and the overlap between them being reflected in the same color.

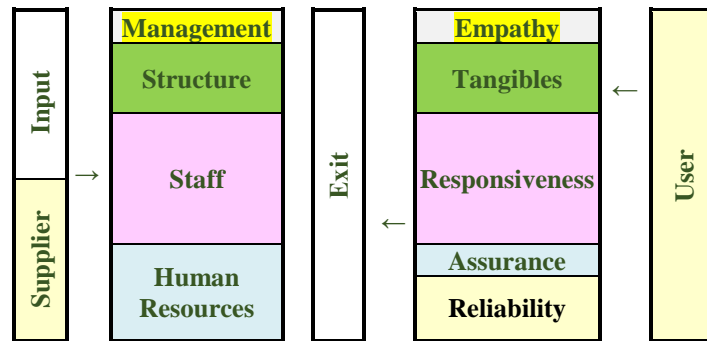


Fig. 2 Correspondence and overlapping of the determinants of the SERVQUAL methodology and the elements of the organization

Roadmap and Results of the Experiment "Conformity" Determinants - Structure":

- Comparison and design of each determinant of the SERVQUAL methodology on an element of the organization
- Each determinant reflects a key place in the structure of the organization and evaluates a certain type of relationship between the elements of both the internal environment of the organization and the elements of the organization and the external environment.
- Aligning determinants with a type of relationship in the organization determines their participation in the creation of the service. Determinants are component components of: the structure of relationships and the process providing the service.
- At the level of the production process and the level of service provision, both qualities - functional and technical - are aligned.
- In the production process, the two types of quality are as a whole, because the transformation of resources can not be realized without structure and relations, respectively - adding value.
- Outside the production process, the two types of quality are conditionally manifested as independent phenomena.
- The separation of technical and functional quality is only for the needs of evaluation and analysis.

4. FUNCTIONAL AND TECHNICAL QUALITY - SAME QUALITY?

As a result of the design of the content of the determinants on the elements of the organization, each of them is "reflected" at a key place and assesses a certain type of relationship that arises between the elements, both in the internal environment of the organization and between the elements of the organization and the external environment. For example, the Tangibles determinant, giving an idea of the structure, may be responsible for relations between smaller units and sub-processes. Reliability is responsible for the relationship "organization - supplier" and "organization - user". Responsiveness - The relationship formed by user contact, which is probably a key measure.

Assurance expresses the attitude "user - human resources, respectively the professional level. Empathy (empathy) - The attitude of management towards consumers (feedback) (Table 1).

Ideal service		Experiment: "Conformity" Determinants - Structure	
Determinant	Content of determinants	Compliance with internal and external environment structure	Determinant - type of relationship
Tangibles	Everything material and tangible to the user of the product / service, such as equipment, staff, communications and materials, amenities and views.	Corresponds to the structure (the internal environment of the organization).	Attitude: between smaller units and subprocesses.
Reliability	Presents the promised service securely and on time, implies performance of contractual relations with suppliers and consumers as well as quality assurance.	It is associated with processes and the whole process	Attitude: "organization - supplier" and "organization - consumer".
Responsiveness	Type of reaction to the organization of the user's wishes.	<i>User contact with staff and organization through politeness and trust in staff, a sense of safety in the relationship with the organization.</i>	Attitude: the relationship formed by contact with the user.
Assurance	Professional competence on the part of the person who performs the service.	It corresponds to the human resources that must have the required capabilities and knowledge to represent the service.	Attitude: "user - human resources, respectively the professional level".
Empathy	Complies with senior management and includes efforts to understand the needs of each particular user and the willingness to provide an individual service.	<i>Feedback of user guidance.</i>	Attitude: between management and consumers.

Table 1 Experiment "Conformity" Determinants - Structure "

The "equivalence" of the determinants of the SERVQUAL methodology with a given type of relationship in the organization of its internal and external environment determines their "participation" in the creation of the service. This means that these determinants affect the main levels of the organization: the potential of the process, the structure and the human resources. It follows that the determinants of the SERVQUAL methodology have a dual nature - on the one hand, conceived as criteria, they are measures of the quality of the activity and on the other - they can be considered as values that must be available all the time, to carry out this activity. Thus, indirectly, they can be considered as component components of both the structure and the relationship and the process that provides the service at the same time. Two arguments support this thesis: (1) the components of the process and (2) the transformation of the process.

According to so. Seven M (7 M) [9], the components are: materials / materials (materials, components or documents involved in the process); manpower / human resources (human factor); methods / methods (design of

product or process and operational procedures); machines / machines (tools and equipment used in the process, measurement / measurement (techniques and tools used to collect process performance data), maintenance / maintenance (system for delivery and care of process components including training of people), management / management (policy, roles and environment).

Process components are constantly changing. One person is replaced by another, the materials are shifting from one supplier to another, the machine is changing, the plans and the programs, too. The goal of total quality management is to make these components easily replaceable, so that their transformation does not lead to destabilization of the process.

The role of the process is to transform incoming resources into output data by adding value focusing on total quality organization. Transformation takes place through the "Quality Triad" - structure, process, result (and the environment). From their hierarchical subordination and interaction (the result inherits the process and the process - the structure) [4] follows that in each criterion the dependencies of the whole chain would be reflected. This suggests that measuring the result is measured by the process, and by measuring the process, we measure the structure.

The potential of human resource is manifested in the process of producing the product / service to create value over its own value (added), which is the basis of total organization of quality and the relationship "result - process - structure". In this sense, the provision of a service is not just the very contact between the supplier and the consumer. The contact focuses on the invisible to the user factors: technology, professional knowledge and skills, equipment, communications that are felt as a result (impact / change). In essence, they are resources that the process converts as a result. Therefore, at the level of the production process and the level of service delivery, the two qualities - functional and technical - are aligned. They have to be considered as one, because the transformation of resources could not be done without a structure, respectively - adding value. Outside the production process, both types of quality could manifest as independent phenomena.

Therefore, the SERVQUAL methodology is a measure not only of the functional quality for which it is designed and as currently considered, but also of the technical quality of the service.

CONCLUSIONS

1. Each determinant is "responsible" to measure a certain type of relationship within the organization's internal environment or between the organization and the external environment.
2. Determinants of the SERVQUAL model are dual in nature - they are criteria and factors of quality at the same time, and a value that must be available throughout the production of the product / service.
3. At the level of the production process and the level of service delivery, the two qualities - functional and technical - are aligned. They have to be considered as one.

CONCLUSION

Through the "Determinants - Structure" Conformity Experiment, an attempt is made to assess the technical and functional quality. Hypothetically, it is possible to exhibit any determinant of the SERVQUAL methodology on an element of the organization. Determinants assess types of relationships in the organization's internal environment and between the organization and the external environment. At the level of the production process and the level of service provision, both qualities - functional and technical - are aligned. They have to be considered as one, because the transformation of resources takes place through the structure and adds value. In the production process, the two types of quality - functional and technical - are the same thing, and their differentiation is conditional for the needs of analysis and evaluation.

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