EXTRACTION OF SERVICE DESIGN ITEMS IN RESTAURANTS BY THE SENTENCE COMPLETION TEST

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Abstract

**Introduction**: Also in ergonomics, research of service is very important. But a research of the service design is seldom still done. **Methods**: The questionnaire survey was done to clarify the factors of “the service of restaurants for people to go to”, and “the service of restaurants for people not to go to.” This questionnaire was surveyed using sentence completion test. **Results**: The factors were extracted and the service design items were structured. The items were classified into three categories. Finally, the nine design items were extracted. **Conclusions**: The service design items such as Satisfaction, Expectation, Atmosphere and so on were extracted.

*Keyword: service design items, Sentence Completion Test*

1. Introduction

Service industries occupy 70 percent of Japanese economy and have become to be very important for economic growth. Also in ergonomics, a research of service is important but a research of the service design is seldom still done. So in this paper, the purpose is to structure the service design items using the sentence completion test (SCT and do forth).

2. Test

The questionnaire survey was done to clarify the factors of “the service of restaurants for people to go to (“to go to” and do forth)”, and “the service of restaurants for people not to go to (“not to go to” and do forth).” This questionnaire was surveyed using SCT. After clarifying the factors, the value and the function required for a restaurant was constructed. The service design items were constructed from there.

2.1. Method

(1) How to test

The questionnaire was surveyed using the sentence completion test. SCT is method of projecting oneself on the prepared context. Participants looked short sentence with a blank and made up sentence with a blank by words come into their mind first. The used texts are as follows.

“Since restaurants is ( _ ) and it is ( _ ), I want to go.”

“Since restaurants is ( _ ) and it is ( _ ), I don’t want to go.”

These texts were completed as long as they thought of every categories of a restaurant.

(2) Participants

The participants were total 15 persons of college students and graduate students (8 males and 7
females).

(3) Research objects
The research objects were limited to the restaurants in Wakayama city. Because of questionnaire, fancy restaurants were excluded and the restaurants were limited only to the restaurant which college student uses usually. It is because service is very different by a type of industry and the concept and value are various too much. For the same reason, the restaurants were classified into four categories (<1> Fast food, <2> Cafe, <3> Casual dining, <4> Eatery).

2.2. Results
The extracted text data by the questionnaire were coded and arranged. The blank of sentence of SCT was treated as A and B (ex : “Since restaurants is (A) and it is (B), I want to go.”). The pair of A and B and the pair of B and {I want to go / I don’t want to go} were constructed. Pairs of cause and effect were analyzed using DEMATEL method [1] based on the frequency of the pair. DEMATEL method (Decision Making Trial and Evaluation Laboratory) can express the direction and strength of a relation between elements and identified problem structure. B was considered as value required for service of restaurant and the structural drawing was described by the causal relationship between items was connected with the line. This structural drawing showed the values required “to go to” and “not to go to,” and the functions to realize the values. For example, the functions to realize the value required “the service of fast food for people to go to” were “it’s addictive”, “there is a favorite menu”, “it’s delicious”, “there are menus which can’t eat and make usually.” Finally, values were extracted from the structural drawing and the service design items in restaurants were constructed.

2.3. Discussion
The constructed structural drawing can be used at the time of service design or service improvements. Because the functions to realize are clarified into the values by checking the values applicable to concepts when designed. The realized values and not realized values are clarified by checking the functions realized now when improved. The design items were characteristic items which aren’t seen in the existing service design items because service is limited to restaurants and afresh divided into classification.

3. Classification
The classification of service design items was done to understand the relationship between items of “to go to” and “not to go to.” The items were classified into

![fig1. The structural drawing of value and function](image)
three categories. Finally, the nine design items common to classification of four restaurants were extracted.

3.1. Method of classification

Service design items of “not to go to” were converted to the words of good meaning. Next, the service design items of four categories of restaurants were classified as follows:
(1) The items which are only “to go to.”
(2) The items which are common to “to go to” and what is changed “not to go to” into the reverse meaning.
(3) The items which are only what is changed “not to go to” into the reverse meaning.

The items which are common to four classification of restaurants were extracted and the service design items in restaurants were structured at the last.

3.2. Results

Table 1 is the result of classifying the items. Table 2 shows the items which are common to four classification of restaurants.

3.3. Discussion of classification

The items “to go to” and “not to go to” were extracted in the questionnaire. So, the following thing can be considered from the result. (1) The items which are only “to go to” are natural items for “to go to.”

Therefore these items mean users wish to go to the restaurant if there are these items but are not impressed specially. On the contrary, the evaluation is bad if there are not these items. Next, (2) The items which are common to “to go to” and “not to go to” into the reverse meaning are concerned. These items mean users wish to go to the restaurant if there are these items and don’t wish to go if there are not these items.

In a word, these items are most concerned with the evaluation of service. Finally, (3) The items which are only “not to go to” into the reverse meaning
are concerned. These items exist usually “not to go to”, therefore we have possibility to be impressed by an unexpected service if these items are realized.

These items are applied to the Kano model [2]. The Kano model classifies a quality into “Attractive Quality” and “One-Dimensional Quality” and “Must-Be Quality.” “Attractive Quality” is the quality elements which will be satisfied if these are filled, but it is thought inevitable even if these are not filled. (3) What is changed “not to go to” into the reverse meaning is applied to Attractive Quality. “One-Dimensional Quality” is the quality elements which will be satisfied if these are filled and will not be satisfied if these are not filled. (2) The items which are common to “to go to” and what is changed “not to go to” into the reverse meaning are applied to this. (1) The items which are only “to go to” is applied to this. “Must-Be Quality” is the quality elements which will be thought natural if these are filled and will not be satisfied if these are not filled.

Finally, The items which are common to four classification of a restaurant were extracted. Therefore the service design items in restaurants were structured. When using these service design items, service is designed by counting weight to items.

4. Conclusions
In this paper, we described the service design items extracted using SCT. At first, the questionnaires were sent out in order to acquire the factors of “to go to”, and “not to go to.” The second, the paired words of cause and effect were constructed based on these extracted items and these items were structured using the DEMATEL method based on the frequency of appearance of the paired words. The third, the items were categorized in order to know the relation between the service design items of “to go to” and “not to go to.” Finally, the items existed common to the classification of all services of restaurants were extracted and the service design items in the restaurants were made.

References