



International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

<http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>



Improving the Project Service Performance of Companies Producing and Marketing Kitchen Systems to Provide Sectoral Competitiveness

Yazıcıoğlu Deniz Ayşe^{a*}, Kanoğlu Alaattin^b

^aAssoc. Prof. Dr., Istanbul Technical University, Interior Architecture Department, Taşkışla, Istanbul, Turkey

^bProf. Dr., Istanbul Technical University, Architecture Department, Taşkışla, Istanbul, Turkey

^aEmail: denizayseyazicioglu@gmail.com; yazicioglude@itu.edu.tr

^bEmail: kanoglu@itu.edu.tr

Abstract

The sales/marketing approach of companies, producing and marketing kitchen systems in today's global competitive environment which is only not limited aesthetics, quality and functional performance but also supporting these products with kitchen design services in line with the wishes and requirements of users, has become more and more widespread for sectoral competitiveness and accordingly the issue of kitchen design performance has gained great significance for these types of companies. In this context, scope and objective of the study is to put forward the problems which arise/which may arise in studies conducted in order to determine the wishes and requirements of users which is a part of the project service process of companies producing and marketing kitchen systems and development of solution proposals to eliminate such problems. In line with this defined scope and objective, a web-based survey has been conducted to find out how the designers of a company taken as an example have performed all the related studies to determine the wishes and requirements of users at the first stage as methodology. Subsequently, the results obtained from this survey have been evaluated and the problems have been revealed.

*Corresponding author.

At the last stage, solution proposals have been developed by carrying out two additional web-based surveys and in-depth interviews for elimination of the detected problems.

Keywords: Performance base design; kitchen interior design; user requirements.

1. Introduction

Kitchen design performance indicators of companies, producing and marketing kitchen systems, consist of numerous subcomponents such as satisfaction level of users as to the company's products and services; design, manufacture and installation periods of kitchen and the cost of the kitchen. Accordingly, the sales/marketing approach of companies producing and marketing kitchen systems in today's global competitive environment which is only not limited aesthetics, quality and functional performance but also supporting these products with kitchen design services in line with the wishes and requirements of users has become more and more widespread for sectoral competitiveness and accordingly the issue of kitchen design performance has gained great significance for these types of companies.

Complete and correct performance of the preliminary stage is one of the most important actors and is one of the major factors in affecting the performance of the designers in kitchen design and implementation. In order to achieve this process without errors, determination of the wishes and requirements of users which are the factors that the designer has to take into account most is extremely important. In this context, Arcan and Evci [1] have expressed that everything has a measure within the human design process and stated that combination of single actions arising from the need of acting in accordance with the requirements of humans which is the element to be considered most create spaces of action and spaces of action constitute the spaces of usage by coming together. Accordingly, they stress that interior design is carried out by arrangement of spaces of action and required fixtures with appropriate spaces of circulation. In other words, the interior is designed for humans [2] and the most important design factor for the designer is the user of that space [3].

Kitchen is a work space, personal and social space where numerous activities are carried out. As such, kitchen design starts by identifying who the user is and how the user uses the kitchen. It is not possible to know how to design the space without identifying the user's wishes and requirements [4]. Therefore, the user's wishes and requirements are identified at the preliminary stage. User requirements, which is the most important factor considered as a part of spatial perception in interior design, describes the necessary conditions which the environment has to have in order that one or more than one activities are carried out [5]. In other words, user requirements are the entire environmental and social conditions that help people to continue their lives without feeling discomfort physiologically, socially and psychologically and their being productive in their works [6; 7].

Although there are numerous studies on kitchen design performance in general, as a result of the literature works carried out, scientific data, in which studies conducted specifically in order to determine the wishes and requirements of users which is a part of the project service process of companies producing and marketing kitchen systems are compiled, has not been found [3]. What's more, it has been determined as a result of preliminary interviews carried out with companies producing and marketing kitchen systems in the sector that

these companies have a high demands on the subject.

2. Purpose and Methodology

The scope and objective of the study is to put forward the problems which arise/which may arise in studies conducted in order to determine the wishes and requirements of users which is a part of the project service process of companies producing and marketing kitchen systems and development of solution proposals to eliminate such problems. In line with this defined scope and objective, a web-based survey will be conducted to find out how the designers of a company taken as an example have performed all the related studies to determine the wishes and requirements of users at the first stage as methodology. Subsequently, the results obtained from this survey will be evaluated and the problems will be revealed. At the last stage, solution proposals will be developed by carrying out two additional web-based surveys and in-depth interviews for elimination of the detected problems.

3. Detection of How the Designers of a Company Carry Out Works to Determine the Wishes and Requirements of Users

In the preliminary stage of the project a web-based survey has been conducted to find out how the designers of a company taken have performed all the related studies to determine the wishes and requirements of users and put forward the problems which arise/which may arise, if any, at this stage. At the end of this study, similar answers given to the questions by the company designers have been compiled by bringing them together and results specified in Table 1 have been obtained.

It was observed that there the company did not have a standard form for determining user wishes and requirements and a registry system when the data in Table 1 were evaluated. At this stage it was determined that the designers took notes as to user wishes and requirements on different documents in a way they could understand. Some designers took notes on a form used for taking non-standard measurements while some designers took notes on the daybooks. Furthermore, it was observed in the works carried out for determining user wishes and requirements data collection was performed without using a standard set of questions by designers and questions in different numbers and types were asked to each user.

4. Creation of a Standard Form and Registry System for Determining the User Wishes and Requirements

It has been determined as a common opinion the necessity of creating a standard form and registry system to eliminate the problems which arise/which may arise and which may affect the design performance of the company taken as an exemplary model during the stage of determining the wishes and requirements of users belonging to the current project's service process as a result of in-depth interviews conducted with relevant officers of the company. To this end, literature and practical resources have been firstly investigated to determine all questions asked to determine the wishes and requirements of users with an eye to create the said form and registry system and 83 different questions listed in Table 2 have been obtained [1; 3; 4; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25; 26; 27; 28; 29; 30; 31; 32].

Table 1: Answers given to the questions for detection of the problems at the stage of determining the wishes and requirements of users by the company designers

Questions	Replies
<p>Which questions will you ask in interviews you carry out with your user to determine his wishes and requirements? Please list.</p>	<p>Which style is preferred</p> <p>Which cover model and color are preferred</p> <p>In which type the new devices will be; if they will be built-in are they desired in a tall cabinet?</p> <p>If the existing devices will be used</p> <p>User's lifestyle and how long time the user spends in the kitchen</p> <p>Which changes are requested in the existing kitchen</p> <p>If a part of the counter is desired to be used as table</p> <p>If modifications are requested for the existing installations, wall and floor</p> <p>How much space the pots and pans used occupy</p> <p>If a pantry cabinet is desired for dry food</p> <p>If doors opened up in the upper cabinet be used comfortably</p> <p>If there is (are) particularly desirable cabinet (s) in the kitchen</p> <p>In which side of the sink the dishwasher is has been used to be used</p> <p>How much daylight the kitchen takes</p> <p>If the kitchen sink is desired especially in front of glass, when</p> <p>Desired height of the top cabinet</p> <p>What kinds of accessories are preferred</p> <p>If there are pets or not</p> <p>Number of the family members and their eating habits (If the family members eat together or individually?)</p> <p>If any family member has physical health problems</p> <p>If there are very heavy and large kitchen utensils</p> <p>Which hand the user uses</p> <p>Way of cooking</p> <p>If there is more requirement to counter space or storage space</p> <p>If there is a preferred type of kitchen plan</p> <p>User's personal habits and details which are important in terms of function</p> <p>If there is the habit of making breakfast or eating in the kitchen</p> <p>If a freezer is requested in addition to the refrigerator</p>
<p>Where do you record the answers of questions you ask in interviews you conduct with your users in order to determine their wishes and</p>	<p>Measure book</p> <p>The daybook used for clients</p> <p>Right next to or behind the measure paper</p> <p>Measure form</p> <p>First to the measure book and then to the order form those that are</p>

requirements? Please explain	necessary at the order stage First to the list and then to the file of the user Notepad The file of the user The file on the computer
------------------------------	---

When the data were evaluated, it was observed that the questions used for user identification were in different number in different documents. For example; Beamish and his colleagues [4] used 33 questions while Alonso [33] used 10 questions and Sweet [21] used only 3 questions and they made their evaluations on the basis of these questions. In other words, it can be observed that the structures of these documents used for the same purpose are different to obtain different levels of information [3].

Asking all the questions in Table 2 for determination of the wishes and requirements of users is the most correct approach for improving the design success. However as a result of interviews made with the company designers it was observed that the negotiations with users should be completed within a certain time period and it was not possible to ask the users 83 questions within a certain time period in practice. Accordingly, a new web-based survey which the company designers answered was carried out to determine the average time of interviews made with the users. When the arithmetic average of the answers given to this survey was taken it was observed that the period in question was 53 minutes. In other words, it is necessary to complete interviews made within 1 hour in average.

In line with the obtained time information, the third survey in which the company designers were required to score the 83 questions in Table 2 according to their importance level from 1 to 5 (highest 5 to the lowest 1) was conducted in a web-based way and it was seen that the results obtained were again as given in Table 2.

Table 2: Questions to determine user wishes and requirements and scores received by these questions according to their importance level

Score	Questions
26	What are the requirements as to storage area?
25	In what form is the timeline (start and end date of work, exceptions)? What are the secondary activities carried out in the kitchen?
24	What is the budget? What are the things the users are happy with the existing kitchen? What are the things that the users are not happy with the existing kitchen? What is the most important thing for the person who prepares the meals in the kitchen? Will there be cellar in the kitchen? What is the preferable size of it? How important is it for users to see the view outside? What are the stationary or mobile kitchen appliances? How often are they used?

	<p>What kind of kitchen sink is prepared?</p> <p>What kind of fuel is used?</p> <p>Which colors are preferred?</p> <p>Which materials are preferred?</p> <p>Which style (s) is preferred?</p>
23	<p>What is the request as to the appearance of the kitchen and feeling it has to create?</p> <p>Does the person (s) who prepares the meals in the kitchen have specific expectations?</p> <p>Who is the person giving decision as to the kitchen's design?</p> <p>Will the kitchen be open to living room?</p> <p>Is there need for a special storage area for any equipments or food and beverages?</p> <p>Are there any devices which need to be protected among the existing devices?</p> <p>What kind of accessories is required in the kitchen?</p> <p>Which colors are required to be in the kitchen?</p>
22	<p>What is the biggest problem of the existing kitchen?</p> <p>What is the request as to the relations of the kitchen with the adjacent spaces?</p> <p>What are the ages of the people using the residence?</p> <p>Is there a person (s) with physical handicaps?</p> <p>Which hand does the person preparing the meal use?</p> <p>Will there be a washing machine in the kitchen?</p> <p>Is the ventilation system in the kitchen adequate?</p> <p>How many people do usually eat together in the kitchen?</p> <p>Which colors are preferred by the other people who use the residence?</p>
21	<p>What is the type of project (renewal of the current situation/new construction)?</p> <p>Why is there need for a new kitchen?</p> <p>Is it requested to enlarge the kitchen?</p> <p>What is the number of people using the residence?</p> <p>Is a relaxation corner required in the kitchen?</p> <p>How important is natural lighting for users?</p> <p>How quiet and effectively do the existing devices work?</p> <p>Is food waste disposer required?</p> <p>Where is the dining area required to be?</p> <p>If it is requested to eat in the kitchen, is it preferred to eat on the kitchen bench or is a separate table requested?</p> <p>Which colors are not preferred?</p>
20	<p>Is it required to replace or to completely eliminate an existing structural feature of the space?</p> <p>When was the residence built?</p> <p>What are the relations of the people using the residence with each other and what are the specific requirements?</p> <p>Is a control system for decorative purposes, protection from sun or for privacy necessary?</p>

	<p>Is there need for a special fixture?</p> <p>Is there a water filter system in the residence?</p> <p>Is radio or TV required in the kitchen?</p> <p>Is there special furniture, a decorative design element or a work of art that reflects the lifestyle of the user?</p> <p>Will the guests be entertained in the kitchen?</p>
19	<p>What is the scope of the project (such as renewal of the kitchen furniture and changing the surface coating etc.)?</p> <p>How long is it planned to live more in the residence?</p> <p>What is the social status of the people using the residence?</p> <p>Are there children people using the residence? How old are they?</p> <p>How is the kitchen used? Who use the kitchen most?</p> <p>How much time is spent during the day in the kitchen?</p> <p>Is a recyclable food waste system which separates the food waste required?</p>
18	<p>What are the anthropometric measurements of the users?</p> <p>How many people prepare the meals at the same time in the kitchen?</p> <p>Who is the person in particular who prepares the meals?</p> <p>Will the child at home use the kitchen for doing his homework?</p> <p>Are there any furniture which need to be protected among the existing furniture?</p> <p>Is there need for more than one kitchen sink in the kitchen?</p> <p>Is food waste compactor required?</p> <p>What types of meals are consumed (appetizers, meals which take a long time and etc.)?</p> <p>Is it important for users to have a sustainable design?</p> <p>Is there a religious belief system which will affect the design?</p> <p>Do friends or relatives use the kitchen?</p>
17	<p>How often is the food shopping made?</p> <p>Is the kitchen a socializing area for the users of the residence?</p> <p>Are entertainments organized often in the residence?</p> <p>Are entertainments realized with large groups in the residence?</p>
16	<p>Is there need for more than one dishwasher?</p> <p>What types of material and food are bought during grocery shopping?</p>
15	<p>Is an office corner required in the kitchen?</p>
14	<p>When was the existing kitchen constructed?</p> <p>Since when has the residence been used for living?</p> <p>Are there pets? What kind? How many?</p> <p>Is the kitchen at the right place of the residence?</p> <p>What kinds of food are cooked?</p>
13	<p>Which door of the house is used after coming from shopping?</p>

5. Conclusions

When the data in Table 2 were evaluated it was seen that the most important questions to determine user wishes and requirements were first and foremost included the ones regarding requirements to storage space and then start and end date of the work, budget, general usage way of the kitchen, things which give and do not give satisfaction in the existing kitchen, who prepared the food, what kind of fuel was used in the cooking part and the factors affecting the aesthetic appearance of the kitchen (color, materials, style, etc.). Again, when the data in Table 2 were evaluated it was seen that the most trivial questions utilized to determine user wishes and requirements were which door of the house is used after returning from shopping if an office corner is desired in the kitchen, since when the present kitchen was used, since when the people were living in the house and etc.

The questions in table 2 were used in a strategically important store of the company practically according to the scores they received by taking into account these evaluations and it was seen that only 52 questions which had a score of between 26-20 could be asked within a time period of 1 hour.

A standard form and registry system to be used by company designers to determine user wishes and requirements was structured in line with all these determinations obtained by using 52 questions which had a score of between 26-20 in Table 2 average.

6. Results

It will be possible to ask the most important questions within the time frame allocated to the user and the interview thanks to the forms and registry system created within the study. This will enable the project service processes to proceed in a healthier way as well as creation of projects with higher design performance. Furthermore, because these data were collected by using a standard set of questions by each designer they will be converted into a cluster of information (data base) from which various statistical results can be obtained. Statistical results such as upper and lower limits of the budgets allocated by the users for renewal of their kitchen, colors and materials mostly preferred by the users and etc. will be able to be reported and these reports will be able to be used by related departments of the company and for purposes of sales, marketing, R & D and etc. thanks to this database.

Acknowledgement

This article was prepared by using data belonging to a certain phase of the research project titled "A Holistic Process Management Model for Increasing the Design Performance of Companies which Produce and Distribute Kitchen Systems". As such, we would like to express our sincere thanks and appreciation both to Scientific Research Projects Department of the Istanbul Technical University and Dođtař-Kelebek Mobilya Sanayi ve Tic.A.ř. which have kindly supported the cited research projects.

References

- [1] Arcan, E.F. ve Evcı, F. (1992). *Mimari Tasarıma Yaklařım 1-Bina Bilgisi Çalıřmaları*, İki k Yayınevi,

İstanbul.

- [2] Bulthaup. (2010). Bulthaup b3-The Kitchen Living Space, Bulthaup Gmbh et Co KG, Aich, Germany
- [3] Yazıcıoğlu, D.A. and Kanoğlu, A.(2015). Enhancement of the Designer Performance in Kitchen Interior Design", *Advances in Social Sciences Research Journal*, Vol. 6, No. 2, pp. 1-8.
- [4] Beamish, J.,Parrott, K., Emmel, J. andPeterson, M.J. (2013). *Kitchen Planning-Guidelines, Code, Standarts*, John Wiley&Sons, Inc.,Hoboken, New Jersey.
- [5] BAÜ Mimarlık. (2005). *Mimari Biçimlenmeyi Etkileyen Faktörler*, <<http://bauarchitecture.files.wordpress.com/2010/09/ders-2.pdf>>, Erişim tarihi: 13 Ekim 2011.
- [6] Korur, S., Sayın, S., Oğuzalp, E.H. ve Korkmaz, S. Z. (2006). Konutlarda Kullanıcı Gereksinmelerine Bağlı Olarak Yapılan Cephe Müdahalelerinin Fiziksel Çevre Kalitesine Etkisi, *Selçuk Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi*, c.21.
- [7] İnceoğlu, N. (1982). *Mimarlıkta Bina Programlama Olgusu*, İ.T.Ü. Mimarlık Fakültesi, İstanbul.
- [8] Taylor, L. (1997). *Kitchens*, New HollandPublishers (UK) Ltd.
- [9] Ching, F.D.K. (2004). *İç Mekan Tasarımı-Resimli*, Yapı Yayın, İstanbul.
- [10] Stephenson, H. andStephenson, L. (1960). *Interior Design*, StudioBooks, London.
- [11] MasterBrand Cabinets, Inc.(2013). *Basic Design Skills: CreatingTheWell-Designed Kitchen*, <<http://www.mbcitouch.com/marketingcenter/content/documents/BasicDesignManualMBCI060409SE.pdf>>, viewed: 29 November2013.
- [12] Quotify. (2013). *Kitchen Design Checklist*,<<http://www.quotify.com.au/kitchens/buyer-guides/checklists/kitchen-design-checklist-questions-to-ask-yourself>>, viewed: 29 November 2013.
- [13] Alonso, F. (2012). *10 ThingsYouNeedtoKnowBeforeYour Kitchen Remodel*, <<http://info.avarchitectsbuilt.com/blog/bid/216495/10-THINGS-YOU-NEED-TO-KNOW-BEFORE-YOUR-KITCHEN-REMODEL>>, viewed: 30 November 2013.
- [14] Conran, T. (2005). *Kitchens*, Ocopus Publishing Group Ltd.,London.
- [15] Anonim. (2002). *Mutfak ve İletişim*, Eczacıbaşı, İstanbul.
- [16] Yazıcıoğlu, D.A. (2010). *Mutfak Tasarım Süreci, Literatür Yayınları*, İstanbul.
- [17] JagKitchens. (2013). *A Kitchen Wish List*, <<http://jagkitchens.co.nz/images/stories/kitchen%20wishlist.pdf>>, viewed: 29 November 2013.
- [18] Fairley, T. (2012). *10 Questions to Ask Your Design Clients*, <http://www.wsidesignermarketplace.com/content/designer/Design_Blog/2012/02/10_questions_to_ask.html>, viewed: 29 November2013.
- [19] HarringtonCollage of Design. (2013). *3 Questions to Ask Your Interior Design Clients*,<<http://www.harrington.edu/Student-Life/Blog/July-2012/3-Questions-To-Ask-Your-Interior-Design-Clients>>,viewed: 29 November2013.
- [20] CrabtreeKitchens. (2013). *Kitchen Design-Client Brief*, <http://www.crabtreekitchens.co.uk/Client%20Brief_Crabtree.pdf>, viewed: 9 December 2013.
- [21] Sweet, F. (2003). *Kitchen Essentials*, RylandPetersand Small, Inc., New York.
- [22] Dynamic Space. (2013). *Checklist, kitchenplanning*, <<http://www.dynamicspace.com/dynamicspace/en/04/01/05/index.html>>, viewed: 09 December 2013.
- [23] IndigoChre Design. (2013). *Client Questionnaire*, <<http://www.indigochre.com/contact/client-questionnaire/>>, viewed: 09 December 2013.

- [24] Susan E. Brown Interior Design. (2013). Client Questionnaire, <http://susanebrown.com/?page_id=422>, viewed: 10 December 2013.
- [25] KAI Interior Design. (2013). Client Questionnaire, <<http://www.docstoc.com/docs/15421779/kai-client-questionnaire-doc---KAI-Interior-Design--DallasFort>>, viewed: 9 December 2013.
- [26] DaveFox. (2013). Kitchen Design Questionnaire, <<http://www.davefox.com/getting-started/plan-your-project/kitchen-design-questionnaire>>, viewed: 9 December 2013.
- [27] Graetz. (2013). Kitchen Design Questionnaire, <<http://www.pdfking.com/images/large/8459-kitchen-questionnaire.gif>>, viewed: 9 December 2013.
- [28] Platinum Designs LLC. (2013).Kitchen Design Questionnary, <http://platinumdesignsllc.com/files/KITCHEN_DESIGN_QUESTIONNAIRE.pdf>, viewed: 10 December 2013.
- [29] Desing Salon Online.(2013). Design Brief Client Survey, <<http://www.designsalononline.com/resources/Questionnaire%20Kitchen.pdf>>, viewed: 10 December 2013.
- [30] JRL Kitchen Design. (2013).Questionary, <<http://jrlkitchendesign.com/wp-content/themes/JRL/images/JRL-Design-Package.pdf>>, viewed: 10 December 2013.
- [31] Studio 10 Interior Design. (2013). Client Questionary,<<http://studio10interiordesign.com/wp-content/uploads/client-questionnaire.pdf>>, viewed: 10 December 2013.
- [32] Aldrich, R. (2013). Client Questionnaire. <http://www.redmondaldrich.com/designkit/DesignKit_Client_Pack.pdf>, viewed: 10 December 2013.
- [33] Alonso, F. (2012). 10 Things You Need to Know Before Your Kitchen Remodel, <<http://info.avarchitectsbuild.com/blog/bid/216495/10-THINGS-YOU-NEED-TO-KNOW-BEFORE-YOUR-KITCHEN-REMODEL>>, viewed: 30 November 2013.