



AD-HOC AS A TIMELESS AVANT-GARDE IN PRODUCT DESIGN AND A SURVEY ON CONTEMPORARY DESIGN CRITERIAS

Sezin ERYILMAZ¹

¹Halic University, Faculty of Architecture, Turkey. E-mail: sezineryilmaz@halic.edu.tr

ABSTRACT

In these years when we are nearing the quarter of 2000, where global competition is increasing day by day customer expectations and demands are accelerated in parallel with the speed of the competition. It can be seen both as a reason and as a result of this acceleration caused by design strategies.

In this study, the design priorities of the designers involved in the design of ad-hoc design were investigated, 36 participants from Istanbul were asked to question about design priorities. With the use of survey primary data were obtained from the answers and analyzed using SPSS 23.0 one-way anova was used for the analysis. With results this research analyses existing ad-hoc design strategies in design process and selection of design priorities in the ad-hoc design process. According to the resulting results, the criteria that the designers gave importance to during the ad-hoc design process were found to be fashion and creativeness.

Key Words: Adhocism, Design decisions, Design priorities

1. INTRODUCTION

In an increasingly globalizing world we live, changing dynamics of life, with the rapid advance of technology, constantly changing consumer demand and in the fields of production, service, marketing, service, management, and design, it is seen that the definitions and scope have changed.

The design process is more than just a work that assigns an only physical value to the product; problem-solving, adding value to the product, changing the life, determining the economic power, providing competitiveness, improving sensitivity.

It is used as a strategy that provides interaction due to product design is a critical factor of new product success, especially because technological and manufacturing innovations have made it challenging for consumers to differentiate between products based on features and quality (Hoyer and Stokburger-Sauer, 2012; Veryzer, 1995).

As for Norman, The design field has focused on understanding consumers' emotional needs, and therefore, researchers have started to investigate the perceptions and emotions of users from their interaction with products (Norman 2004).

According to another opinion; within this innovational race, primary concentration of designers tends to magnetize masses with yet-untold-stories and attract a sudden attention with the charm of the unexpected. When discussions of ecological apprehensions show up, sustainable solutions join up to the game and brings new options for designing tools with a diversity beyond imagination (Erdil, T.,2018). Design strategies have always been into strong

bends with socio-cultural, socio-economic and cultural dynamics of certain centuries' specific conditions (Erdil, T., 2017).

Thus, design product and social de facto has always carried forward their fluidness through each other. What in this fluidness; from time to time, designers found themselves in a role that satisfies the expectations of the society from art; and sometimes made conscious or non-conscious contributions to cultural and social manifestations in order to shape or manipulate accustomed praxis's imagination (Erdil, T. 2018). The fact that design practice is resource constrained, often in terms of time, financial investment, and professional expertise, causes user involvement to be seen as an expensive luxury that is not always necessary (Grudin, 1991).

This wide variety of ideas about the concept of design and the growth of that it comes to both the designer and the producer has also taken other trends with the introduction of different production processes and approaches. Ad-hocism is just one of these trends and has started to talk about its name as a design strategy. All those factors affect contemporary design strategies differently and they are all the components of Ad-hoc strategies which examine artistic values of design product as a manifestation of contemporary tendencies towards design (Erdil, T. 2018).

1.1 Adhocism

Adhocism is a term which first used 1968 in architectural criticism by Charles Jencks. Combines ad hoc, meaning "for this" specific need or purpose and ism, referring to a movement in the arts. 'Adhocism' denotes a principle of action having speed and economy and purpose and utility...it involves using an available system is a new way to solve a problem quickly and efficiently (Jencks and Silver, 2013, p.9). Adhocism privileges the movement when creation takes place just after two or more elements, systems or components are bought together in a new combination or synthesis (Jencks and Silver, 2013, p. viii). This produces a mix of experiences due to interaction with the object or product involving nostalgia, deja-vu and surprise, an important concept in creativity (Bruner, 1962).

Nathan Silver (Jencks and Silver, 2013, pp 139-143) consider that an adhocist sensibility include eight affective elements. These are the pleasure of unexpected recognition; the appreciation of hybrid forms; contrived spontaneity; the appreciation of function; nostalgia; superiority of the perceiver and the principle you love to hate.

1.2. Adhoc design and Art

Adhocist praces' origins start within the twentieth-century movements of surrealism and dada. Art critic Robert Hughes (1991, pp.61, 213) traces the origins of movements to the reaction to World War One and the political and social upheavals across Europe from the early Twentieth Century (Adank, 2015, pp5). Duchamp's Bicycle wheel is the probably the first artistic work to explicitly present the ad-hocism of mere choice and combination as art (Jencks and Silver, 2013, p.139).



Figure 1 (a) Marcel Duchamp, "Bicycle Wheel", 1913, (URL-1).



Figure 1 (b) Marcel Duchamp, Fountain 1916, (URL-2).

Duchamp's most influential work Fountain 1916/1974 this was achieved by achieved by placing a men's urinal on a plinth in a different orientation to what it would ordinarily be seen from, signing and dating the item and recontextualizing it in art context by entering it in an exhibition of contemporary art. Duchamp recognized that an object is defined by its context. Changing the context changes how the object is perceived or understood (Elgar 2004, p.80).

1.3. Adhocism in product design

The use of adhoc strategies as a part of everyday practice in design preceeds the coining of the term adhocism (Adank.2015 pp.9). Adhocism as a consequence of its very nature is a contentious industrial design practice, '...prosper(ing) like most hybrids on the edge of respectability (Jencks and Silver, 2013, p. vii).

One of first adhocism example Consumer's rest, provide a seating solution for the consumer in the basket of their consumption, evokes the pleasure of unexpected recognition along with an appreciation of the functional utility provided by the repurposed shopping trolley (Adank, 2015). It displays stylistic pluralism with an ironic sub text (Adamson and Pavitt, 2011, p.260).



Figure 2. Consumer's rest by Stiletto Studios, 1983 (URL-3).

Another product example is Campana brothers design Cafe Chair. The wicker component embraces and engulfs the plastic chair components, producing a new concept of seating through a mashed up hybridization. This chair provides identification with a political agenda and the development of meaning as an ironic comment on the invasion of plastic in the Brazilian quotidian (Adank,2015).



Figure 3. Campana, F and Campana, H., 2006. Cafe chair (URL-4).

If we look at Mezzadro, it embraces the appreciation of hybrid form through its careful selection of components and the use of color, texture, form and materiality in a manner that enhances their heterogeneity. New function and nostalgia are delivered in a confident self-assured design for domestic consumption (Adank, 2015).



Figure 4. Castiglioni, A., Castiglioni, P.G., 1957. Mezzadro stool (URL-5).

2. METHODS

2.1. Participants

The research was based on a descriptive and analytical approach which has been done in 2018. (The survey period was from January to February 2018).

Total of 88 survey copies was distributed to professionals who are related to the ad-hoc design process. These professionals consist of industrial designers, architects, interior architects, engineers, managers, technicians in the related industries. A total return of survey was 36 which rate is 40.9%.

Of the 36 professionals who participated in these research by returning the survey, 30 are males and 6 are females and the percentages by gender are %83.34 and %16.6 respectively (Table1). Age distribution of survey are interval 26-40 years and 41-60 years and the percentages are %69.4 and %30.6 respectively. There are no participants between with 18-25 and above 60 (Table2). Graduation profiles of participants made up of 13 engineering majors, 9 design education and 14 other majors and the percentages %36.1, %25 and %38.9 respectively which are summarized in (Table3). When we look at the sales of the people who participated in this survey study, which refers us with the production and design of Ad-hoc design, 13.80% sell the products they designed only in the showroom, while 58.4% sells only with the internet channel. 38.9 percent of participants using both channels are summarized in Table 4.

2.2. Survey Design

Survey Questions were generated through a review of the literature and an examination of instruments in the literature and also conversations with experts in these fields. The survey started with demographic questions which included participants' personal characteristics to aim to examine the relationship between background of the participants and ad-hoc design attributes and also relationship between the persona and the criteria it prioritizes when doing ad-hoc design. The other part of survey consists the 10 design criteria (Aesthetics, Economic, Functionality, Ergonomics, Creativeness, Sales, Fashion, Form, Material, Safety) determined in it, which are the first degree, second degree and third degree that are given priority in creating ad-hoc designs, continue with the questions that measure the features that are important. With these 10 elements supported by the literature, designers were asked what their first priorities were when they designed ad-hoc design, the same question continued with other questions such as second priority and third priority. The purpose of asking these three questions is to measure the perspectives of the designers of ad-hoc design in the relevant sector, to determine which criteria are considered more important in the design of the ad-hoc design by those who work as designers, to develop possible design strategies, predict user interest, measuring tendency to the other elements. Survey ended with Likert-scaled statements in order to get both qualitative and quantitative data for the research. The aim of this question is to identify participants deciding their level of the ad-hoc design strategies agreement which are "Strongly agree", "Agree", "Neither agree nor disagree", "Disagree", "Strongly disagree"

3. DATA ANALYSIS

A nine-item survey which has four open-ended questions and three Likert-scaled statements have been prepared. The survey starts with demographic questions which help to use the background of the participants by getting information about their major, gender, age and ended with the expert question of the ad-hoc design process. All data was recorded under the columns, similar answers were summed up for gathering quantitative data.

First, the demographic characteristic of the research was calculated, the answers to each question were determined, the score distribution percentage, mean, standard deviation and t-test were examined and comparisons were made, scales were summed and averaged. Secondly, Likert-scaled statements data is gathered and calculated which are the scale from 1 to 5 ('1' is "strongly disagree" and '5' is "strongly agree",) Lastly, linear regression models were constructed to identify the demographic characteristic associated with the selecting ten design criteria of ad-hoc design elements. Independent variables included gender (male & female), age (18-25, 26-40, 41-60, 61+), graduation profiles (engineering, design, other fields), sales channels (showroom, internet and both). Cronbach's alpha was calculated to assess scale internal consistency. For each hypothesis an analysis of variance (ANOVA) was used, differences were considered significant at the $p < 0.05$ level. All analysis was performed using SPSS v22. Table 5 shows the descriptive statistics value for design parameters.

According to the survey analysis, to measure the adequacy of the sampling size Kaiser-Meyer-Olkin (KMO) test were done which result was 0.88. If the value found by KMO test is below 0.50, it can be said that the value is out of the accepted level, if the value is 0.60, average acceptance; if it is 0.70, good; if it is 0.80, very good; and if it is 0.90, the acceptance level is perfect (Karagöz & Kösterelioğlu, 2008:86-87). In this research, KMO's test acceptance level was very good.

4. FINDINGS

4.1. Demographic Characteristics of Participants

In total, 36 professionals returned the survey who are 6 female (%16.6) and 30 (%83.4) male. As seen in Table 3, %36.1 of the participants are engineers, %25 are designers and %38.9 are in other fields. The majority of participants were between 26 and 40 years of age (%69.4) (Table 2). Nearly %60 of the participants sell their ad-hoc design product by the internet, only %13.80 of participants sell their ad-hoc design product by the showroom.

Table 1. Gender Distribution of Participants

	Frequency	Percent	Cumulative Percent
Male	30	83.34	83.4
Female	6	16.66	100.00
Total	36	100	100

Table 2 Age Distribution of Participants

	Frequency	Percent	Cumulative Percent
18-25	0	0	0
26-40	25	69.4	69.4
41-60	11	30.6	100.00
62+	0	0	0
Total	36	100	100

Table 3. Graduation Profiles of Participants

	Frequency	Percent	Cumulative Percent
Engineering	13	36.1	36.1
Design	9	25	61.1
Other fields	14	38.9	100.00
Total	36	100	100

Table 4. Sales Channels

	Frequency	Percent	Cumulative Percent
Showroom	5	13.80	13.80
Internet Sales	21	58.4	72.20
Both	10	27.8	100.00
Total	36	100	100

4.2. Important Criterias of Ad-Hoc Design Process

The ad-hoc product is seen in Creativity and Fashion with 25% (9) as the first-degree important element by the participants in the design process. These two criteria share the first place by the participants. The ad-hoc, known as an approach that takes its origin from functionality and creativity, can be proved as a concrete feature that supports this approach by the creativity of the first-important element by the participants. The closest alternative shares five different criteria with Aesthetics, Economic, Functionality, Sales and Form 8.334% (3). Despite the rich material diversity offered to the designer by adhocism, it is surprising that the analysis of the survey was the second most important factor as the first degree by the participants. Safety was not seen by any participant in the design priority. Designers' first-degree priorities in ad-hoc design process are as follows:

Table 5. First Degree Priorities

	Frequency	Percent	Cumulative Percent
Aesthetics	3	8.334	8.334
Economic	3	8.334	16.668
Functionality	3	8.334	25.002
Ergonomics	2	5.55	30.552
Creativeness	9	25	55.552
Sales	3	8.334	63.886
Fashion	9	25	88.886
Form	3	8.334	97.22
Material	1	2.78	100
Safety	0	0	100
Total	36	100	100

In the Ad-hoc product design process second degree priorities when we look at the important elements of the form 27.8% (10) with the first rank. In second place, it is seen that functionality is 16.67% (6). For participants importance of the second degree, important elements were not as important as the elements they considered, the first was not a criteria they shared. In contrast to the previous analysis (Table 5), where Fashion was the first important design element and shared its first place with Creativeness, it became the last with

2.78% among the most important design elements. Table 6 shows the ranking of other elements.

Table 6. Second Degree Priorities

	Frequency	Percent	Cumulative Percent
Aesthetics	2	5.55	5.55
Economic	4	11.1	16.65
Functionality	6	16.67	33.32
Ergonomics	2	5.55	38.87
Creativeness	4	11.1	49.97
Sales	2	5.55	55.52
Fashion	1	2.78	58.3
Form	10	27.8	86.1
Material	3	8.334	94.44
Safety	2	5.55	100
Total	36	100	100

In terms of 3rd degree, Sales is the most important criterion with 19.5% (7), while Creativeness is the second with 16.67% (6). It is seen in the analysis that Creativeness takes place as a criterion for the designers in every degree of the ad-hoc design process. Aesthetics, Economic, Functionality and Fashion 11.1% (4) shares the third place. With the value of 2.78% (1), Safety is ranked as the least important criterion of the participants. Seen in (Table 7).

Table 7. Third Degree Priorities

	Frequency	Percent	Cumulative Percent
Aesthetics	4	11.1	11.1
Economic	4	11.1	22.2
Functionality	4	11.1	33.3
Ergonomics	2	5.55	38.85
Creativeness	6	16.67	55.52
Sales	7	19.5	75.02
Fashion	4	11.1	86.12
Form	2	5.55	91.67
Material	2	5.55	97.22
Safety	1	2.78	100
Total	36	100	100

Table 8. Graduation profiles & first degree priority

	Aesthetics	Economic	Functionality	Ergonomics	Creativeness	Sales	Fashion	Form	Material	Safety	Total
Engineering	1 %2,78	2 %5,55	1 %2,78	2 %5,55	3 %8,334	1 %2,78	2 %5,55	1 %2,78	0 %0	0 %0	13 %36.1
Designer	2 %5,55	0 %0	1 %2,78	0 %0	2 %5,55	1 %2,78	1 %2,78	1 %2,78	1 %2,78	0 %0	9 %25
Other Fields	0 %0	1 %2,78	1 %2,78	0 %0	4 %11.1	1 %2,78	6 %16.67	1 %2,78	0 %0	0 %0	14 %38.9
Total	3 %8.334	3 %8.334	3 %8.334	2 %5,55	9 %25	3 %8.334	9 %25	3 %8.334	1 %2,78	0 %0	36 %100

When graduation profiles is compared with the first degree elements, it is seen that the engineering element that engineering graduates place in the ad-hoc design process is creativity with 8,334% (3). This fact is also of primary importance for participants with graduation profiles design, but it is seen that the fact shares the first with the Aesthetics element (Table 8).

The ones that completed master's degree in another field 38.9% (14) of the participant's design shows as the first degree importance of other majors (25%) as a part of the Creativeness, but this fact is also shared with Fashion first place came out in the analysis. Ergonomics, design element in the ad-hoc design process is considered to be of primary importance only in engineering fields. While economics, engineering and other fields are considered to be of primary importance, it is seen that the participants with the major design have no value at all. Material is considered as an important element by the participants who have only master degree design. Safety was not considered to be significant in any major (0%). When we look at the data obtained from the Chi-Square test, 0.00 shows that there is a statistically significant relationship between Graduation Profiles and the first degree priorities in the ad-hoc design process (Table 9).

Table 9. Chi-Square Test

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	35.33	10	0.00
N of Valid Cases	36		

When gender and 1st degree factors are compared, it is seen that 19.44% of men (7) and 5.55% (2) of women give more importance to Creativeness than other elements (Table 10).

It is surprising that Fashion, who shares the first degree important element with Creativeness, is only 25% (9) as an important element by men. Ergonomics, Form, Material elements are seen as important by men only. Aesthetics, Economic, Functionality and Sales were found to be important for women. It can be said that there is no difference in terms of gender according to gender, because of the parallelism of importance levels. In addition, according to 0.363 data obtained from Chi-Square test, there is no statistically significant relationship between gender and ad-hoc design process (Table 11).

Table 10. Relationship between gender & first degree priorities

	Aesthetics	Economic	Functionality	Ergonomics	Creativeness	Sales	Fashion	Form	Material	Safety	Total
Female	1 %2,78	1 %2,78	1 %2,78	0 %0	2 %5,55	1 %2,78	0 %0	0 %0	0 %0	0 %0	6 %16.66
Male	2 %5,55	2 %5,55	2 %5,55	2 %5,55	7 %19.44	2 %5,55	9 %25	3 %8.33	1 %2,78	0 %0	30 %83.34
Total	3 %8.33	3 %8.33	3 %8.33	2 %5,55	9 %25	3 %8.33	9 %25	3 %8.33	1 %2,78	0 %0	36 %100

Table 11. Chi-Square Test

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	5.30	5	0.363
N of Valid Cases	36		40

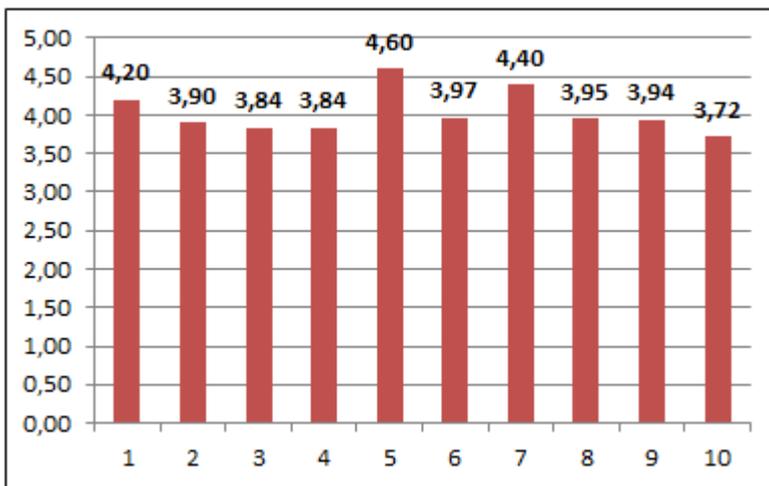
In the evaluation made by using Likert scale (1-Strongly disagree / 5- Strongly agree), it was found that each of the elements taken by the ad-hoc design element is averaged over 1 to 5 scale. According to the results obtained by taking the average of the participants in the ad-hoc design process, the 1st degree important facts ,in order of importance are listed according to this, Creativeness, Fashion, Aesthetics, Sales, Form, Material, Economic, Functionality, Ergonomics, Safety elements are affected (Table12).

Table 12. Likert-scale average table

	average
Aesthetics	4.20
Economic	3.90
Functionality	3.84
Ergonomics	3.84
Creativeness	4.60
Sales	3.97
Fashion	4.40
Form	3.95
Material	3.94
Safety	3.72

(1-Strongly disagree/ 5- Strongly agree)

Table 13.Likert-scale Average Chart



1= Average value of level of agreements about "Aesthetics"
 2= Average value of level of agreements about "Economic"
 3= Average value of level of agreements about "Functionality"
 4= Average value of level of agreements about "Ergonomic"
 5= Average value of level of agreements about "Creativeness"
 6= Average value of level of agreements about "Sales"
 7= Average value of level of agreements about "Fashion"
 8= Average value of level of agreements about "Form"
 9= Average value of level of agreements about "Material"
 10= Average value of level of agreements about "Safety"

5. CONCLUSION

This study investigates a selection of design priorities in ad-hoc design process for this purpose, a survey was applied to the participants about the ad-hoc design process. The participants of the survey are engineers, industrial designers, architects, interior architects, engineers, managers, technicians in the related design companies in Istanbul. The survey answers are analyzed and compared with each major.

In this research, it was seen that many factors influenced ad-hoc design process decisions while doing ad-hoc design. Aesthetics, economic, functionality, ergonomics, creativeness, sales, fashion, form, material and safety this 10 criteria participants of design priorities consisting of, when we look at the participants design priorities in the ad-hoc design process they give importance to the first degree design elements which are creativeness and fashion.

In the second and third-degree evaluation, form, %27.8 and sales %19.5 chosen mostly. These results are a proof of consumers' demand for ad-hoc designs. With using Likert scaling (1-Strongly disagree / 5-Strongly agree) in the evaluation, it was found that the answers of each design element were averaged and where it was found on the scale between 1 and 5. Based on the results obtained by taking the average of participants in ad-hoc design process 'Sales', 'Fashion' and 'Aesthetics' elements were found more important as observed.

When looking at the majors of participants, for engineers' view creativeness, economic and ergonomics comes forward as design priorities in the ad-hoc design process. For designer's view, the order of importance of the criteria is almost evenly distributed by the participants, aesthetics and creativeness are some of the most prominent design priorities for them.

Not included in design and engineering majors but when we look at the other field's view the prominent design criteria are fashion and creativeness. In the evaluation made according to gender, no statistically significant result was observed.

As it is observed in the survey, adhocism offers a wide range of opportunity to the designer when considered as a design strategy, ad-hoc design priorities can differ. The fact that Fashion is the leading criterion in most analyzes confirms that the impact of adhocism as a design strategy will increase.

In this study, motivational ways of ad-hoc design and ad-hoc design were investigated through only ten design criteria determined by the literature. Similar studies can be applied with different design criteria, the same criteria can be extended by one major or the same design product.

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