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CREATIVE PATTERN TRIALS FOR ABOVE THE KEYBOARD WEAR WITH TROMPE L'OEIL ILLUSION

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Abstract: The design scenario of this study is based on seeking answers to the question "How can we produce different, extraordinary and original shirts for working women with the Trompe l'oeil (illusion) technique?". The sample of the study, in which the user-oriented design research method was used, is women working above the keyboard. Within the scope of the study, three women's shirts were produced with creative pattern applications. The classical techniques known in garment production have been reconstructed with the Trompe l'oeil technique. The findings were discussed in two dimensions as the process carried out for these three shirts and the prototype evaluation. Osborn's checklist was used to create the design value of the shirts. For the evaluations of the marketability of the products, measurement was made in the form of voting over Google Forms. As a result of the voting, the first prototype was found to be more suitable for the target audience. Based on the individual comments received, it has been observed that originality varies when the position and needs of the target audience come into play. The importance of the user profile in creative product design has been understood.

Keywords: Creative pattern, Trompe l'oeil, Osborn's checklist, Pretotype, Prototype.

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TROMPE L'OEIL İLE KLAVYE ÜZERİ GİYİM İÇİN YARATICI KALIP DENEMELERİ

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Özet: Bu çalışmanın tasarım senaryosu Trompe l'oeil (yanılsama) tekniği ile "çalışan kadınlara yönelik nasıl daha farklı, sıra dışı ve orijinal gömlekler üretebiliriz?" sorusuna yanıt aramak üzerine kurulmuştur. Kullanıcı odaklı tasarım araştırması yönteminin kullanıldığı araştırmanın örneklemi klavye üstü çalışan kadınlardır. Çalışma kapsamında yaratıcı kalıp uygulamaları ile üç adet kadın gömleği üretilmiştir. Giysi üretiminde bilinen klasik teknikler, Trompe l'oeil tekniğiyle yeniden kurgulanmıştır. Bulgular, bu üç gömlek için yürütülen süreç ve prototip değerlendirilmesi olarak iki açıdan ele alınmıştır. Gömleklerin tasarım değerinin oluşturulmasında Osborn'un kontrol listesinden yararlanılmıştır. Ürünlerin pazarlanabilirliğine ilişkin değerlendirmeler için Google Formlar üzerinden oylama türünden ölçme yapılmıştır. Yapılan oylama sonucunda birinci prototip hedef kitleye daha uygun bulunmuştur. Alınan bireysel yorumlardan hareketle özgünlüğün, hedef kitlenin pozisyonu ve ihtiyaçları devreye girdiğinde değişkenlik gösterdiği izlenmiştir. Yaratıcı ürün tasarımında kullanıcı profilinin önemi anlaşılmıştır.

Anahtar Kelimeler: Yaratıcı kalıp, Trompe l'oeil, Osborn'un kontrol listesi, Pretotip, Prototip.

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1. INTRODUCTION

Trompe l'oeil means eye deceiving or creating the illusion of seeing reality (http 1). What remarkable about trompe l'oeil is that this style tricks your eyes into seeing something with depth, rather than a flat surface. It is one of the oldest optical illusions, going as far back as ancient Greek and Roman murals (http 2).

"This French term was used for the first time in 1803 to describe a particular sort of imagery, whose earliest examples date back to the very beginning of Western history. The style is typified by an extraordinary naturalism that misleads the viewer, at least initially, to perceive that the image is the actual thing that it in fact merely represents" (Leppert, 1996).

Coutureau, (2019, p. 162) expressed about Trompe l'oeil that, "...By trying to achieve a perfect imitation of an object of reality the artist/ craftsman will inevitably be summoned to invent new techniques. It has been a constant source of innovation but also a potential participant in the race for profit, passing from being a symbol of the suspension of art in time and space to becoming a token of our fast and cheap industrial world".

Trompe l'oeil is mostly found in the wall and ceiling paintings that are made to create an illusion in the architectural space in Renaissance Art. It is known to be used to obtain large-scale spaces by using perspective in architectural interiors. When describing an object with trompe l'oeil, it is important for realism that the colors and textures match the object and there are no brush marks (Ruşan and Kozbekçi Ayranpınar, 2020, p. 218-219). The Trompe l'oeil technique is not just a painting field; sculptures (Schifferer, 2002, p. 24), ceilings, and interior decoration such as stage were used on building facades. Even in today's modern cities, the idea of architectural illusion persists as a way to hide unsightly firewalls (Schifferer, 2002, p. 22).

It is possible to see this technique, which aims to create an impressive illusion, in the field of fashion. As seen in Image 1a, Elsa Schiparelli, with her black sweater design in 1927, is known as the first fashion designer who used Trompe l'oeil techniques which is one of the innovation sources in industrial garment design sector (Sterlacci and Arbuckle, 2008, p. 237). This design of Schiaperelli, who is known to be close friends with artists such as Salvador Dali and Christian Berard, is also described as the effect of surrealism on fashion design (Udale, 2008, p. 17). It is known that Christian Dior tried trompe l'oeil with pocket, pleat and low-cut effects in his 1949 and 1950 Spring-Summer collections (Powerhouse, 1994, p. 54-61). And many examples of trompe l'oeil designed by designer Roberto di Camerino in the 1970s (Perego, 2019) are available online today as vintage. Again as seen in Image 1b, Karl Lagerfeld's silk dress with jewel-effect embroidery designed for Chanel in 1983 is also a remarkable example of the period for trompe l'oeil (Polan and Tredre, 2009, p. 134).





Image 1. (*a*)Schiaparelli's trompe l'oeil sweater, 1927. (*b*) Karl Lagerfeld's trompe l'oeil dress for Chanel, 1983.

Trompe Loeil examples can be found in the collections of today's leading designers such as Martin Margiela, Moschino, Comme des Garcons and Gucci. Prominent in these designers' Trompe l'oeil designs; It is the display of clothing details and accessories with the printing technique or the applique technique with strips to create a perception of reality.





Image 2. (a) Margiela, 2009. (b) Moschino, 2017. (c) Comme des Garcons, 2009. (d) Gucci, 2016.

Working conditions, with the worldwide epidemic of COVID-19, have changed in many sectors since April 2020, and people have moved their jobs to the home. Accordingly, fashion makers are setting up the clothing habits of the future, taking into account the epidemic that is not clear when it will end. Trend forecasters point out that home office workers with the computer will adopt a more flexible clothing style than in the past. It is noted that the clothes worn on the upper part of the body will remain more detailed and formal than the lower part (Barut, 2020). One of the changes World's Global Style Network (WGSN) predicts for fashion for the next ten years is "above the keyboard dressing" (Giglio, 2020).

Depending on the situation outlined so far, the design scenario of this study, with the Trompe l'oeil technique, based on answering the question of "How can we produce different, extraordinary and original shirts for career women?".

The study is based on two questions: Prototypes designed with Trompe l'oeil Technique,

1. What steps are required to get enough design value?

2. What is the perceived marketability value?

In this way, it is aimed to offer an alternative to the jacket and shirt duo, which career women have to wear every day due to their positions at work. For this purpose, creative shirt trials were made. It also tried to make designs suitable for the "above the keyboard" trend, which entered our lives with the new normal after the covid epidemic. Thus, a formal but comfortable style combining jackets and shirts was offered to women working in home-office conditions.

The innovation that is tried to be created in terms of design is to present the features of more than one type of clothing on a shirt. Çeğindir and Çakmak (2019, p. 89) mention that innovative pattern trials are new cutting techniques and strategies for creating areas of practice, different from the existing ones for developing creativity in clothing design and production. This innovative strategy is the expression of the new interpretation by the designer with patternmaker to the dress cutting practice and the existing dress forms.

This study is important in terms of questioning and testing new design processes that will contribute to product design strategies in apparel design. Creative pattern practices can serve as an example for product design studies in local, regional and global apparel production, respectively.

2. METHODOLOGY

This research, based on product design, is design based research and was carried out using user-oriented problem solving methods. Designbased research (DBR) has emerged as a new research methodology from the beginning of this century. Being situated in a real context, DBR focuses on examining a particular intervention by continuous iteration of design, enactment, analysis, and re-design (Brown, 1992; Cobb et al., 2003; Collins, 1992). The method in which design experiments and integrated theory require process, iterative design, implementation, analysis and redesign cycle. The method leads to the transmission of theory-related implications to designers and practitioners (Dede et al., 2004, p. 159).

Similarly, the design experiment, called Tim Brown's (2008) "innovative field model", requires different perspectives such as process, problem solving, critical thinking, reflective thinking. Because trials and errors are the most precious processes to reach the result. Establishing the connection between the customer and the designer with prototypes is a more effective and faster process than using words. These experiment the basis of the user experience model.

Steps to solve the design problem are empathizing, defining, designing the idea, first making a pretotype and then creating and testing a prototype (Rosenlykke, 2018). Empathising is to understand the human needs involved; Defining means re-framing and defining the problem with user needs and behavior in mind; Ideating is to create many competing ideas using visual thinking techniques. Prototyping is to adopting a hands-on approach in prototyping, often cocreating prototypes with users and testing is to validate prototypes with real users.

Pretotype, an artifact or technique that can be used to collect products very quickly and very inexpensively. Pretotype is the progress of the design process by obtaining simpler drafts with cheaper materials. Prototype can be called a copy of the final product from non-original materials. Pretotype can be considered as experiments to achieve the final result when it is considered for clothing. Exact information about how to use the garment, dimensions and cost can be accessed through Prototype. At this stage, the question to be asked before moving on to the final product

Brand Positioning	Apparel brands that aim to reach the upper-middle socioeconomic class at international level and create capsule collections with designer collaborations.
Geographic Area	Local, Regional, Global
Target Group	Women working in plazas between 25-45 years of age, not focused on price, but on socioeconomic income level in the middle-to-high.
Product Type	Shirt
Marketing Type	Boutique merchandising and e-commerce
Creativity Grade	Practitioner creativity
Design And Product	New and special forms on manikin with 1/2 scale real body size.
Development Feature	Presenting together the features of more than one type of clothing on one type of clothing.
Focus subject- Concept	Trompe l'oeil, unusual form, original design



Figure 1. Measurement of shirts marketability (testing with google forms).

is "How can it be produced correctly?" (Savoia, 2019).

Based on this question, the sample of the research is the target market suitable for the user-oriented design scenario. This group is defined according to market and concept determination for women's apparel design criteria" given in Table 1 (adapted by Cegindir et al., 2018, p. 114; Fox, 2016). Various shirt trials were made that career women can use in the office. Three final products were created from these trials. Each practice step experienced in the process generated the data of the study.

Osborn (1948) expressed that " Streamlining of design is good, but streamlining the steps in production is even more important (p. 192). Of course, we should make a list of all our ideas. When we have piled up a good measure of alternatives, we can use this as a checklist to help us pile up more (p. 146).

With the Osborn checklist, individuals are able to think freely, go beyond the rules, increase the ideas quantitatively and expand the ideas by combining them (Osborn, 1957; Roquette, 1992; Weiss, 1993). The parameters used in the designs in this study were taken from Osborn's checklist (1992) given in Table 2. Within the scope of the study, a similar path was followed, and ideas were freely draped within the pretotyping stages.

Figure 1 summarizes the research design

prepared by combining the user-focused problem solving approach and Osborn's brainstorming.

The design process that started with empathy of the 3 prototypes selected from the capsule collection in the creative pattern cutting trials in the study ended with the testing (Figure 1). Design details are limited to the front body of the shirts.

The last of the purposes of prototyping is evaluation and feedback. This step requires testing the effect of a limitedly developed/ introduced product, measuring user response, and deciding whether to continue production (Çeğindir, 2018, p. 132). In this direction, a 4-question survey was created on Google Forms. Women working in companies and institutions that have experienced the home-office system were chosen as the target audience. Questions were asked about the suitability of the clothes for the office environment and the home-office environment. In addition, they were asked to vote by determining the parameters related to the design features of the clothes. The opinions they wanted to add about the clothing details were received in writing. As a result of the data obtained from 72 hours of voting and comments, inferences were made about whether the designs would be useful, remarkable, creative and appealing to the customer, and predictions were made about the marketability of the designs.

Expressions	s Description				
Eliminate	Simplifying the elements, skip, remove	1	_	_	
Repeat	Repeating, placing, copying a color, form, shape, idea			✓	
Combining	Bringing together, connecting, mixing, rearranging	1	✓	✓	
Adding	Extend, expand, complete, enlarge		~	✓	
Transfer	Moving the subject to a new object. To adapt, to change location.		✓	✓	
Superimpose	Superimposing different images or ideas.			✓	
Separate	Using only certain parts		✓		
Associating	Searching, comparing, or associating between multiple things	✓	✓	✓	
Distort	To separate the subject from its true meaning and value	1	~	✓	
Contradict	Reversal and rebellion, reject	1	✓	✓	
Transform	Transforming something into something else		✓		
Parody	Make fun of	✓	✓	✓	
Calculate	Considering positive or negative aspects and effects	\checkmark	✓	\checkmark	

Table 2. Parameters used in the design trials.

Ethics committee approval of the study was obtained from Ankara Hacı Bayram Veli University Ethics Committee and is presented as Appendix-1 (10/07/2020 Project nu: 2020/90).

3. FINDINGS

Below are the trial steps of process and visuals of 3 prototypes selected for the collection according to the sub-questions created for the research.

3.1. Research Question 1: What Steps Are Required To Obtain The Design Value Of Shirts Sufficiently?

Trompe l'oeil has been generally applied in the field of fashion design using the printing method. It is possible to come across images of a 3D garment detail printed on the garment to give the impression of "as if". As a different approach from these applications, to three-dimensional details; Osborn's creative parameters such as transforming, repeating, adding etc. have been added. As seen in Table 2, combining, simulating, distorting, contradicting, parodying and calculating parameters were used in all designs. It is thought that these expressions overlap with the Trompe Loeil definitions made earlier.

The extraction, separation and transformation parameters appeared as the least frequently used parameters. Instead of removing the parts from the design, separating them from each other or transforming them into other things, it has been acted with the theme of delusion with small changes and changes. Details of designs like below.

Prototype 1: This shirt is prepared in a new form (trompe l'oeil) with pattern cutting games alternative to classical cutting techniques. For this purpose, the notched collar and extension details, fabric folding, cuts and dart manipulations techniques were used. Instead of each pattern detail, the body's own form was used (Figure 2).

In the design, known collar application

techniques were eliminated, different methods were combined, associating with each other, a distorted image similar to the real collar was obtained. It is also possible to talk about a contradiction and a funny parody, which is not a real collar but evokes its image.



Figure 2. Creative pattern cutting process of prototype 1.

Prototype 2: This shirt, which is used together with a round collar and notched collar, has been tried with alternative cuts with lines, darts and fabric folds. In the pretotype stage, while the collar was in the line cut, it was combined with the body in the following process and served as a concept. The design challenge in this prototype is the high number of parts. This difficulty is eliminated with markings and more careful sewing. More cuts are characteristic of the trompe l'oeil technique.

It can be easily seen in the design that the regional details of different clothing characteristics are combined by adding them together. Applications such as transferring a garment closure to a non-functional slit appearance, associating, transforming, using certain parts of the clothing features by separating them, and thus causing that feature to appear as if it is there, have been applied. In this logic, it is possible to talk about distortion, contradiction, parody and calculation.



Figure 3. C reative pattern cutting process of prototype 2.

Prototype 3: The notched collar, tie binding, extension details have been replaced with conventional techniques alternative cutting in this prototype. The design is based on an illusion that turns from collar to tie. Precise placement steps in the design details are prominent challenges in the design process. The positions of the pattern parts on the garment are arranged by creative draping techniques.

In the design, some features are added to each other by repeating and combining with each other. It is seen that the tie and collar details



Figure 4. Creative pattern cutting process of prototype 3.

have been transferred from their function and transferred one on top of the other and associated with other details. Similar to other models, distortion, contradiction and parody can be mentioned.

As a result of the design trials, a product presentation board covering 3 shirts was created. There are inspiration sources of the collection (mood) and artistic drawings (line up) in the product's presentation board given in Figure 5.

3.2. Research Question 2: What Is The Perceived Marketability Value For Career Women?

After the design process, the target audience/ marketability feature of the prototypes was tested on Google Forms. The photographs of the prototypes visible from the front profile were presented to the voluntary target audience



Figure 5. Product's presentation board.

between the ages of 25-40. When the data obtained at the end of the 72-hour period were analyzed, it was seen that a total of 104 people participated in the survey.

Participants were asked to vote on the designs by considering them in two different ways. The first is for women who work physically in an office environment. The second one is for women who work in a home office under conditions called "above the keyboard". Considering the design features of the shirts, it was thought that two different situations would lead to different results and it was requested to vote in two ways. The data obtained for these two cases are presented below in the form of frequency and percentage in Table 3.

As seen in Table 3, it is seen that the order is the same, although the rates vary. Design 1 was chosen as the most suitable design, followed by design 2 and design 3. In the 1st and 2nd designs,

Prtyp		For Office Workers							For Ebove the Keyboard Workers							
Nu		suitable		unsuitable		undecided		suitable		unsuitable		undecided		Total		
	f	%	\mathbf{f}	%	f	%	Total	f	%	f	%	f	%			
1	92	88,46%	3	2,88%	9	8,65%		94	90,38%	6	5,76%	4	3,84%			
2	89	85,57%	4	3,84%	11	10,57%	f:104	91	87,49%	5	4,80%	8	7,69%	f:104		
3	60	57,69%	15	14,42%	29	27,88%	%100	59	56,73%	18	17,30%	27	25,96%	%100		

Table 3. According to the 72-hour marketability order of the target audience.

the percentage of compliance was 85% and above for both cases, while the rates were below 60% in the 3rd design. The following participant comments explain the reason for this:

"I don't like the third design's collar looking like a tie and looking messy."

"For the first question, my answer would be appropriate if the third model was black."

"The second design was more elegant to me, I think it would be better if the color was changed. I found the third design a bit ambitious, but why not on a special day. I found the first design a bit boring, it can be enhanced. Thanks."

"I found the third design more modern, unusual and striking because of the collar and skirt details. He has a nice style. The first two are very ordinary."

It has been concluded that the most suitable prototype for women working on the keyboard is the number 1 prototype. The second prototype went head-to-head with the first prototype throughout the voting and finished second by a small margin. It can be said that the second prototype is suitable too for the use of women working in the office. Considering the rates and comments, it can be said that the third prototype's collar detail is not suitable for the target audience, despite its striking features. The number of selections and percentages of the 6 parameters determined for the design features of the models are presented in the Table 4 below:

When Table 4 is examined, it is seen that the most useful and ordinary model is the first design. The third one was rated as the most creative, the most striking and the most different. Although the distribution of votes rate in the "None" parameter is quite low, the second design received the most votes. When the results and comments are evaluated, it is thought that the symmetry of the first model is effective in choosing it suitable for the target audience. In addition, it is thought that its general appearance, which is reminiscent of a jacket, has an effect as well. In line with the voting, it can be said that the collar feature, which is the accent piece in the third design, is unusual.

Looking at the comments, it was revealed that the 3rd prototype received at least as much attention as the others, but considering the target audience, the 1st and 2nd prototypes were found suitable. The 1st prototype was mostly voted for because it looked minimal and formal. The 3rd prototype made a pretentious, umformal impression to

Table /	Total	numhar	of	parameters selected.
Idple 4.	10101	nunver	01	parameters selected.

Prtyp	Pr	actical Creative		Striking		Different		Ordinary		None		
Nu	f	%	f	%	f	%	f	%	f	%	f	%
1	84	80,76%	21	20,19%	13	12,49%	15	14,42%	37	35,57%	2	1,92%
2	56	53,84%	36	34,61%	17	16,34%	37	35,57%	12	11,53%	5	4,80%
3	17	16,34%	49	47,11%	75	72,11%	59	56,73%	2	1,92%	4	3,84%

some and was therefore considered inappropriate for working women.

4. RESULTS

Three extraordinary shirt prototypes were prepared in the research, in which the Trompe L'oeil technique was combined with creative diecutting techniques. It was questioned whether the prepared prototypes were suitable for career women working in offices and at the keyboard. The results obtained from the research questions are given under the following two headings.

4.1. Design Value Of Prototypes

Prototype 1, creates a creative process with darts and fabric folds. Initially, pattern pieces were tested with different colored fabric pieces, but it was concluded that this was not unusual. The creative solution has been achieved with collet shifts and folding. The prototype obtained represents an extraordinary experience that will be an alternative to the known shirt and jacket duo.

Prototype 2, covers the details of clothing with folds, cuts and collets, a creative process created by illusion. Each pattern piece is intended to add value to the design. At the end of the process, a creative application was achieved by combining the shirt and jacket collar with the trompe l'oeil technique. The large number of pattern parts created disadvantage. Simplicity has been achieved by reducing the number of parts and steps from to switch in transition pretotype to prototype.

Prototype 3, is the output of a creative process based on bindings, opening and closing detail, and height measurement. As a design feature, the tie binding detail of the collar styling has been designed. It is possible to obtain this image in the most accurate way by experimenting with measurement and placement. For this reason, the draping method and cutting technique were combined in the process of obtaining creative patterns. The fact that it is a design that does not include collet shifts, cuts, and fit elements has both accelerated and facilitated the preparation process.

4.2. The Marketability Of The Prototypes

A 72-hour survey was conducted on Google Forms. The 1st prototype was evaluated as the most suitable design for the target audience. Its minimal and formal appearance was influential in this vote. As a result of the voting, it can be said that the 2nd prototype is a design suitable for the target audience. However, although the 3rd prototype was liked by the participants, it was marked that it was not suitable for the target audience. From this point of view, it has been observed that no matter how attractive a design is to the eye, if it is not suitable for the determined target audience, it may fall behind in the ranking.

This idea -which target audience is a career women who desires to look different while working on office or at home and attend business meetings in a way that can only be seen above keyboard- might to be an important both commercially and design wise for brands as such as Massimo Dutti, Roman, Vakko, Sarar and Network.

4.3. Future Studies

The research progressed from pre-to typing to prototyping. No changes or corrections were made to the designs in line with the feedback received from survey. This study revealed that the connection between the creative product and the target audience should be determined correctly. It is clear that the creativity of the product is not enough. With more detailed and long-term studies to be carried out in the future, user-oriented studies should be planned on the compatibility of the product with the target audience for the marketability of the product.

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- Image-1b: Karl Lagerfeld's trompe l'oeil dress for Chanel, (1983). https://www.metmuseum.org/art/collection/search/701372 (Date of Access: 12.02.2020).
- Image-2a: Martin Margiela Spring Ready to Wear, (2009). https://www.vogue.com/fashion-shows/spring-2009-ready-to-wear/ maison-martin-margiela/slideshow/collection (Date of Access: 20.02.2020).
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- Image-2c: Comme des Garcons Spring Ready to Wear, (2009). https://www.vogue.com/fashion-shows/spring-2009-ready-towear/comme-des-garcons/slideshow/collection (Date of Access: 20.02.2020).
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