

Systematic review of Persian articles on user experience in products based on the PRISMA method

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Abstract

User experience research always leads to understanding the real needs of customers. The present research is a systematic review study that employs the PRISMA method to examine and analyze Persian articles published in the field of product user experience. The PRISMA method was used for this research. The primary criterion for selecting articles was their focus on the desirable user experience for utilizing a product. Out of 160 published articles in Persian-language databases, journals, and various conferences in the field of product user experience, 126 articles were ultimately selected for analysis in this research. The findings revealed that out of 126 researchers, 87 were male (69%) and 39 were female (31%), indicating that male authors contributed approximately twice as much as female authors. Journals such as “Journal of Fine Arts: Visual Arts” with 23 articles, “Quarterly Journal of Brand Management Quarterly” with 19, and “Dastavard Journal” with 11 articles ranked first to third in publishing articles on product user experience. The research also showed that the use of qualitative research methods in the studies was significantly less compared to quantitative methods. Only a few articles utilized phenomenological, ethnographic, and grounded theory approaches. A wide range of topics emerged in the research, including product design based on visual and practical features, exploring the relationship between user emotions and product features, the impact of human emotions in the design process, user and product understanding, user-centered design, user enthusiasm in product purchasing, the influence of commitment on brand name and its connection with the product’s mental engagement, providing patterns of user behavior towards products, effective brand management with cognitive and personal structures of users, and improving product marketing and sales. The findings also indicated that the majority of published articles were research-based (109 sources, 87%), with the fewest articles being conference papers (8 articles, 6%). Keywords such as design, product, user, and emotion were the most frequently used in the 126 reviewed articles. The results of this study provide suitable solutions and guidelines for informing product designers to design products that align with users’ needs, interests, and preferences.

Keywords: Interactive design, user experience, user interface, product user experience, user experience in art, user-centered design
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1 Introduction

The utilization of user experience in design has always been geared towards understanding the real needs of customers. Designing products based on customer needs provides the necessary groundwork for attracting the attention of product manufacturers. Listening to customer opinions and preferences is a crucial principle in product design and can lead to the expansion of valuable assets for producers. Identifying user habits and interactions with products contributes to product improvement. Interactive design enhances the communication between the user and the product [66]. Users' emotions towards product features and the translation of these emotions into the mentioned features in product design form the basis for interactive communication between the product and the user [119].

The lived experience of users in using products plays a significant role in their enthusiasm and repeated return to products for reuse. Loyalty and repeated return to a product for reuse result from the proper application of user experience examination methods and interactive design phenomena. Recognizing the psychological needs of individuals and designing or redesigning products based on emotions, feelings, and psychological needs of individuals will have a considerable impact on the growth and development of product markets. Meanwhile, some research results indicate that product features can evoke emotions such as admiration, calmness, satisfaction, entertainment, happiness, and joy [122]. The use of lived experience in product design is instrumental in approaching the needs of all groups in society towards interactive designs. For example, some, like [23], speak of an emotion-oriented approach in designing toys to create emotional appeal in children. The concept of play and toys, children's emotional preferences, the role of different levels of brain structure in analyzing the emotional aspects of products, the concept of affordance in play, and its application are elucidated, and a model for designing toys is proposed.

Some, like [43], have focused on human-centered product design from the perspective of cognitive psychology, drawing on various cognitive psychological viewpoints. They propose solutions to designers to design products based on human cognitive abilities. In general, it can be said that attention to user experience in product design has promising horizons, and the development and progress of products rely on attention to user needs and precision in needs-based design. The present research is a systematic review study that employs the PRISMA method to examine and analyze Persian articles published in the field of product user experience. The primary criterion for selecting articles was their focus on the desirable user experience for utilizing a product. Out of 160 published articles in Persian-language databases, journals, and various conferences in the field of product user experience, 126 articles were ultimately selected for analysis and investigation. Table 1 outlines the input and output criteria of the sources and articles used in this systematic review.

Table 1: Inclusion and exclusion criteria for scientific resources

Criterion	Input Criteria	Output Criteria
Content	Focus on studies conducted in the field of sensory design, interactive design, user experience, user interface, user interface design, product user experience, user experience in art, user-centered design, and Kansei engineering.	Research studies that did not address the concept of desirable user usage for product utilization.
Language	Published Scientific Resources in Persian	Non-Persian Scientific Resources
Date of Release	Without time limitations	-
Type of scientific resource	Review articles, scientific research articles, and conference papers held nationally and internationally within Iran.	Books, Reports, Editorials, Short articles (less than 5 pages)

2 Research Questions

1. What is the distribution of researchers in the field of product user experience in terms of gender?
2. Which journals or conferences have published articles on product user experience?
3. What research methodologies do researchers in the field of product user experience use in their published works?
4. What are the focal topics of researchers in the specific field of product user experience?
5. What types of sources are examined in the field of product user experience?
6. What thematic trends are observed in the examined sources in the field of product user experience?

3 Research Methodology

This is a review research that utilized the PRISMA method to examine and analyze Persian articles published in the field of product user experience. PRISMA consists of a checklist with 28 items, and the selection of items in this

checklist is preferential. In this cross-sectional descriptive-analytical study, the main criterion for selecting the chosen articles was research studies focusing on the concept of desirable user usage for utilizing a product. Data collection sources included Persian search databases (Noormags, Civilica, Portal of Humanities Articles, Irandoc, Magiran, Elm-Net, Sid.ir) and art-related journals, including Fine Arts, Brand Management, Dastavard, New Marketing Research Journal, Bagh-e Nazar, Modiriyatfarda, Journal of Visual and Applied Arts, Business Management, Iranian Journal of Wood and Paper Science Research, Business Strategies, & Jelve-y Honar. Researchers conducted searches using keywords such as Kansei engineering, sensory design, interactive design, user experience, user interface, user interface design, product user experience, user experience in art, user-centered design. The search yielded a total of 160 full-text articles from the results of these searches.

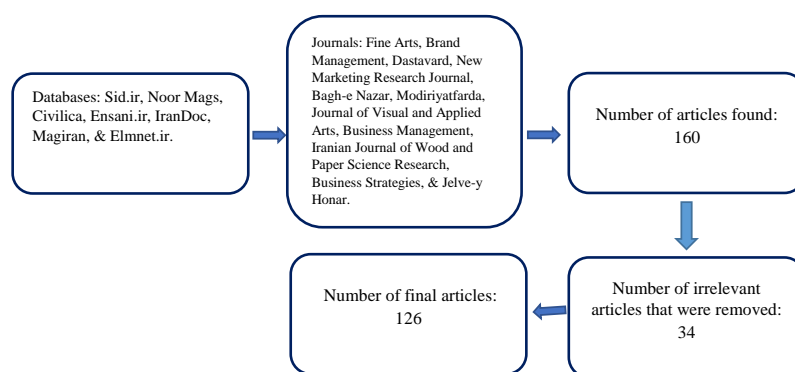


Figure 1: Search process for articles

4 Distribution of Researchers in the Field of Product User Experience by Gender

The research findings indicate that out of a total of 126 researchers in the field of product user experience, 87 are male (69%) and 39 are female (31%). These researchers have been engaged in conducting research or writing articles in this field during the research period. Table 2, represents the frequency distribution of authors based on gender.

Table 2: Frequency of Authors Gender

Row	Gender				Total
	Men	Percent	Women	Percent	
1	87	69	39	31	126

5 Journals or Conferences Publishing Articles in the Field of Product User Experience

The frequency of journals publishing articles in the field of product user experience is observable in Table 3. The Fine Arts-Visual Arts Journal leads with a total of 23 articles, followed by the Brand Management Journal with 19 articles, and the Dastavard Journal with 11 articles. These rankings represent the order of publication frequency of articles in the field of product user experience.

Table 3: Ranking of Journals/Conferences Publishing Articles Based on Frequency

The title of Journals/Conferences	Frequency
Journal of Fine Arts: Visual Arts	23
Quarterly Journal of Brand Management	19
Dastavard	11
Journal of Visual and Applied Arts	4
Journal of Marketing Management	4
Iranian Journal of Wood and Paper Science Research	3
Modiriyatfarda	2
Journal of Ergonomics	2
Journal of Color Science and Technology	2
Theoretical Principles of Visual Arts	2
New Marketing Research Journal	2
Bagh-e Nazar	2
Journal of Iranian Architecture & Urbanism	2

Other conferences and publications such as the National Conference on Art, Culture, History and Production of Handmade Iranian Carpets, Naqsh-e Mayeh Journal, Visual Arts and Applied Arts Journal, Mechanical Engineering Journal, Academic-Research Journal of Academic Librarianship and Information Science, and other sources with only one published work in the product user experience field, are not referenced in the table above. For brevity, their names have been omitted.

6 Research Methods Used by Researchers in the Field of Product User Experience

Various research methods employed by researchers in the field of product user experience are observable in Table 4. Researchers in this field have utilized quantitative research methods much more than qualitative methods in their studies. The survey method significantly outweighs other quantitative and qualitative research methods.

Although the use of qualitative research methods in studies related to product user experience has been conventional, their number and frequency are considerably lower compared to quantitative methods. It seems that, given that researchers in the product design field, based on user experience, need to have maximum understanding of their audience and familiarity with various intellectual and mental aspects of their audience, the use of qualitative methods in their research, which leads to a deeper understanding of the audience, does not hold a prominent position. Only a few articles, using phenomenology, ethnography, and grounded theory methods, have been produced and published by researchers.

7 Topics of Interest to Researchers in the Field of Product User Experience

Researchers in the field of product user experience have explored a variety of topics in their studies. Table 5 illustrates at least 22 main subjects that researchers in this field have focused on.

An overview of the first to seventh rows of the above table indicates a noticeable frequency of works with topics such as designing products based on determined physical and functional features, investigating the correlation between users' emotions and product features, the impact of human emotions and feelings in the design process, user and product understanding, user-centered design, user enthusiasm in purchasing a product (using color, packaging, appropriate visualization, customer support, payment methods, cost, trust, customer interaction, product appearance, customer purchasing intent in relation to the image of the producing country, product engagement, product quality, packaging, brand trust), the impact of commitment on the name and brand, and its connection with mental engagement with the product, providing a pattern of user behavior towards products, effective brand management with cognitive and user personal elements, and improving product marketing and sales. These themes have been highly visible in the years of research.

8 Types of Examined Sources

Data analysis reveals that out of the total 126 examined sources, 109 sources (87%) are scientific research articles, and only 9 articles (7%) are papers published in conferences and symposiums. Additionally, 8 articles (6%) belong to the category of review articles. Table 6 illustrates the distribution of the frequency of various types of published sources in the field of product user experience.

Table 6: Distribution of the Frequency of Various Types of Published Sources in the Field of Product User Experience

Row	The Frequency of Various Types of Published Sources in the Field of Product User Experience					
	Review Articles		Conference Papers		Original Research	
	frequency	percent	frequency	percent	frequency	percent
1	8	6	9	7	109	87
Total	126					

Authors of articles in the field of product user experience have primarily endeavored to publish their articles in scientific journals with research degrees.

Table 4: Distribution of Research Methods Used by Researchers in the Field of Product User Experience

Row	Approach and Method	Citation
1	Quantitative approach	Survey Alanchari et al. [7], Khodadadeh and Rostamkhani [21], Nunjad et al. [90], Yazdani [120], Nematizadeh and Seraji [88], Koliani Mamaghani and Morshedzadeh [69], Khatami Firouzabadi and Mazroui [63], Koliani Mamaghani et al. [70], Dadkhah Fard and Mortezaei [27], Tajedini et al. [117], Hasangholipour Yasvari et al. [48], Rezaee Arab and Nazari [94], Aslefallah et al. [11], Tabatabaee Nasab et al. [112], Dehdashti Shahrokh et al. [27], Faezi and Norouzi [38], Ebrahimi et al. [33], Ebrahimi et al. [32], Ziaei et al. [123], Rashtchian et al. [93], Adabi [2], Jafari et al. [54], Karimi Alavijeh et al. [57], Maleki MinBashRazgah and Siahsharani Kojouri [73], Khashayari and Mirabi [61], Mohammadian et al. [80], Nazeri et al. [87], Amiri Aghdaie et al. [10], Bagheri Taleghani et al. [19], Salmani Nodoooshan et al. [100], Teimouri and Jahangiri [117], Karimi Alavijeh and Zarrinfard [58], Azimi and Azizollahy [14], Esfidani et al. [36], Mousavi and Saedi [83], Nourpour and Panahi [89], Ghafourian Shagerdi et al. [44], Taherian Ojaroud and Faraji [116], Mohammadi Nasab and Eskandari [79], Khodadadeh and Yaghoobian [66], Namayandegi [85], Choopankareh and ZorriyAsateyn [26], Ajdari and Seyed Abrishami[4], EsnaAshari and Mosaddad [37], Madjidi and Faraj Asri [71], Soleimani and Halimi [109], Bagheri [16], Azarbouyeh Dinaky and Ghazizadeh [13], Barani [21], Bagheri [17], Rezvani and Malek Pour [95], Kazemeyni [59], Dianat et al. [30], Soleimani [108], Jooriyan et al. [56], Yousefi and Shadmehri [121], Moghaddam [76], Moghaddam and Rahayi [77], Bagheri Taleghani [18], Balazadeh and Movahedi Jam [20], Jahangiri and Teimouri [55], Aliari et al. [9], Mohammadzadeh and Eghbali [81], Barati Pour [23], Faraji and Baktash [39]
		Case Study Tolooei and Alanchari [119], Nunjad et al. [90], Alanchari and Tolooei [8], Choopankareh et al. [25], Rohani Farahmand [96], Faezi and Norouzi [38], Tajdini et al. [113], Azad Disfani [12], Faregh and Khalkhali [42], Sadeghi Naeini [97], Shirmohammadi et al. [107]
		User-Oriented Design Method Ebrahimi [31], Yazdani [120], Shamsi et al. [105], Safar Dezfooli et al. [98], Safar Dezfooli et al. [99], Pourkhorshidi [91], Sheikhi and Kaedi [106], Khorsandi and Cheraghpour Samvati [67]
2	Mixed Method	Correlation Method Abdolvand and Nickfar [1], Kheiri and Najafi [62], Tajdini et al. [115], Dehghan et al. [29], Shaabani et al. [103], Mirfakhredini and Shabani [75], Mirfakhredini et al. [74], Allahdadi and Ramezani [5, 6], Barani and Zamani [22], Salmassi et al. [101], Khodadad Hosseini et al. [64], Seyyedamiri et al. [102]
		Delphi Method Faraji and Rufiger Esfahani [40]
		Kansei Engineering Method Kolaini Mamaghani and Khoram [68], Tolooei and Alanchari [119], Alanchari and Tolooei [8], Aslefallah et al. [11], Hashemzade and Bahrami [50], Mohammad Alizadeh et al. [78], Bozorgi Zadeh et al. [24], Hadadian and Madhoushian Nejad [46], Allahdadi and Ramezani [5, 6], Nazeri et al. [87], Talebpour et al. [117], Hashemzade et al. [51]
3	Qualitative Method	Causal-Comparative Method Makkian [72]
		Mixed Method Naeimi et al. [84], Nasiraei et al. [86], Hashemzade and Bahrami [50], Hasanpour et al. [49], Kazemi and Bakhshandeh [60], Mohammadian et al. [80], Ipaki and Merrikhpour [53], Erisian and Sadeghi Naeini [34], Sohrabi et al. [111], Mousavi and Amiri Aghdaie [82], Gerami and Zangi [43]
		Descriptive Hatami Saeid Abadi et al. [52], Hajipour et al. [47]
3	Qualitative Method	Phenomenology Choopankareh et al. [25], Pourmand [92], Ghobadi Lamuki et al. [45], Soleimani et al. [110], Faregh and Hajian Foroushani [41]
		Ethnography Zare et al. [122]
		Grounded Theory Esmailpour et al. [36], Babaei Zakliki et al. [15]

Table 5: Topics of product user experience research

1	Product design based on defined physical and functional characteristics	Alanchari et al. [7], Nunjad et al. [90], Alanchari and Tolooei [8], Yazdani [120], Kolaini Mamaghani and Morshedzadeh [69], Khatami Firouzabadi and Mazroui [63], Safar Dezfooli et al. [99], Rohani Farahmand [96], Hasangholipoor Yasvari et al. [48], Pourkhorshidi [91], Tajdini et al. [113], Sheikhi and Kaedi [106], Mohammad Alizadeh et al. [78], Allahdadi and Ramezani [5], Erisian and Sadeghi Naeini [34], Soleimani et al. [110], Jahangiri and Teimouri [55], Mousavi and Amiri Aghdaie [82], Aliari et al. [9]
2	Examining the connection between users' emotions and product features, the influence of human emotions and affect in the design process, user and product understanding	Koleini Mamaghani and Khoram [68], Tolooei and Alanchari [119], EsnaAshari and Mosaddad [37], Soleimani and Halimi [109], Rohani Farahmand [96], Aslefallah et al. [11], Kazemeyni [59], Adabi [2], Nasiraei et al. [86], Hashemzade and Bahrami [50], Hasanpour et al. [49], Bozorgi Zadeh et al. [24], Hadaheian and Madhoushian Nejad [46], Amiri Aghdaie et al. [10], Faregh and Khalkhali [42], Allahdadi and Ramezani [6], Teimouri and Jahangiri [118], Talebpour et al. [117], Balazadeh and Movahedi Jam [20], Hashemzade et al. [51], Karimi Alavijeh and Zarrinfard [58], Zare et al. [122], Mohammadzadeh and Eghbali [81], Mohammadi Nasab and Eskandari [79], Khorsandi and Cheraghpour Samvati [67], Gerami and Zangi [43]
3	User-centered design	Ajdari and Seyed Abrishami [4], Nunjad et al. [90], Alanchari and Tolooei [8], Ebrahimi [31], Yazdani [120], Choopankareh et al. [25], Safar Dezfooli et al. [98], Kolaini Mamaghani et al. [70], Dadkhah Fard and Mortezaei [27], Bagheri [17], Pourkhorshidi [91], Naeimi et al. [84], Ziaei et al. [123], Ipaki and Merrikhpour [53], Barani and Zamani [22], Taherian Ojaroud and Faraji [116], Faraji and Baktash [39], Faraji and Ruffiger Esfahani [40]
4	User enthusiasm in purchasing products (using color, packaging, proper visualization, customer support, payment method, cost, trust, customer relations, product appearance, relation of purchase intention to image of country of origin, product familiarity, product engagement, product quality, packaging, brand trust)	Khodadadeh and Rostamkhani [65], Kheiri and Najafi [62], Azarbouyeh Dinaky and Ghazizadeh [13], Faezi and Norouzi [38], Rezaee Arab and Nazari [94], Dehdashti Shahrokh et al. [27], Ebrahimi et al. [33], Tajdini et al. [115], Dehghan et al. [29], Jafari et al. [54], Karimi Alavijeh et al. [57], Kazemi and Bakhshandeh [60], Khashayari and Mirabi [61], Mohammadian et al. [80], Barani and Zamani [22], Azimi and Azizollahy [14], Khodadad Hosseini et al. [64], Seyyedamiri et al. [102]
5	The impact of brand commitment and its relation to product mental engagement	Abdolvand and Nickfar [1], Mohammadian et al. [80], Nazeri et al. [87], Babaei Zakliki et al. [15], Salmassi et al. [101], Shirmohammadi et al. [107], Mousavi and Saedi [83], Khodadad Hosseini et al. [64], Seyyedamiri et al. [102], Ghafourian Shagerdi et al. [44]
6	Presenting a model of user behaviors toward products	Khodadadeh and Yaghoobian [66], Namayandegi [85], Nematizadeh and Seraji [88], Shamsi et al. [105], Azad Disfani [12], Maleki MinBashRazgah and SiahSarani Kkojouri [73], Hajipour et al. [47], Faregh and Khalkhali [42]
7	Effective brand management using users' cognitive and personal constructs, improving product marketing and sales	Makkian [72], Tabatabaee Nasab et al. [112], Faregh and Hajian Foroushani [41], Sohrabi et al. [111], Esfidani et al. [36], Ghafourian Shagerdi et al. [44]
8	Examining and analyzing the causes, applications, contexts, and outcomes of animating and humanizing artifacts	Choopankareh and ZorriyAsateyn [26], Kolaini Mamaghani and Morshedzadeh [69], Barani [21]
9	Presenting a model for classifying product features, identifying and ranking factors affecting customer satisfaction with the product	Tajdini et al. [117], Rezvani and Malek Pour [95], Nourpour and Panahi [89]
10	Semiotics and semantics, understanding the product concept	Madjidi and Faraj Asri [71], Kolaini Mamaghani et al. [70], Moghaddam and Rahayi [77]
11	Introducing concepts of emotional design	Bagheri [16], Hatami Saeid Abadi et al. [52], Barati Pour [23]
12	The impact of customer participation on new product development	Shaabani et al. [103], Mirfakhredini et al. [74], Mirfakhredini and Shabani [75], Soleimani [108]
13	The relation between shopping experience and consumer behavior in purchasing original and alternate products	Ebrahimi et al. [32], Esmailpour et al. [36], Salmassi et al. [101]
14	The role of user interfaces in designing home products	Rashtchian et al. [93]
15	Ergonomic approaches in product design	Dianat et al. [30], Salmani Nodooshan et al. [100], Sadeghi Naeini [97]
16	Improving user interaction and appropriate usability in interactive products	Bagheri Taleghani [18], Bagheri Taleghani et al. [19]

17	Creative industries and user-driven innovation	Jooriyan et al. [56]
18	Creating or changing behavior through behavioral design (persuasion, formulation, encouragement, etc.)	Dadkhah Fard and Mortezaei [27]
19	Aesthetics of intimacy	Pourmand [92]
20	Branding using archetypes	Ghobadi Lamuki et al. [45]
21	A product's concept is much more important than interaction details in user-centered design.	Ajdari and Seyed Abrishami [4]
22	Emphasizing child-centered design	Yousefi and Shadmehri [121]

9 The most prominent thematic trends

Findings reveal that a total of 1,320 keywords have been used in 126 articles within the research community. Among these, 477 keywords such as “design” with a frequency of 100 words, “product” with a frequency of 55 words, “brand” with a frequency of 45 words, “user” with a frequency of 26 words, and “emotion” with a frequency of 25 words are present in the examined articles. Considering that the frequency of other keywords used in the text is less than 25, and very high, researchers decided to avoid mentioning them in this section to prevent elongation of the text.

10 Conclusion

Systematic studies can play a crucial role in helping researchers become familiar with areas and interaction methods with users when facing a product by presenting the results of conducted research. In this study, 126 articles in the field of product user experience were analyzed and examined. Most of the articles, using questionnaire distribution among a specific statistical community, analyzed and examined their research variables, considering various design criteria. Researchers presented the research results in the form of guidelines and suggestions, offering solutions tailored to users' needs and satisfaction, as well as improving interaction with the product. The results of this study provide suitable solutions and guidelines for informing product designers to design products that align with the needs, interests, and preferences of users.

References

- [1] M.A. Abdolvand and F. Nickfar, *Investigation of the relationship between product involvement and brand commitment*, J. Market. Manag. **6** (2012), no. 13, 75–94.
- [2] N. Adabi, *The influence of material selection in emotional attributes of product design*, J. Fine Arts: Visual Arts **21** (2016), no. 3, 87–94.
- [3] A. Ajdari and M. Karimpourlalehdashti, *The study of the product personality of sedan cars by the perspective of Iranian customers using kansei engineering*, J. Fine Arts: Visual Arts **22** (2017), no. 3, 75–84.
- [4] A. Ajdari and A. Seyed Abrishami, *Investigation of idea generation methods based on empathic design*, J. Fine Arts: Visual Arts **39** (2009), no. 1, 113–121.
- [5] M. Allahdadi and M. Ramezani, *Efficacy of consumer oriented design interventions in products design (Design of drug container for the elderly using Kansei Engineering)*, J. Fine Arts: Visual Arts **24** (2019), no. 4, 111–122.
- [6] M. Allahdadi and M. Ramezani, *Reflection of users interactions in the design of drug container for the elderly using Kansei Engineering*, J. Visual Appl. Arts **12** (2019), no. 25, 87–100.
- [7] N. Alanchari, M.S. Owlia, and N. Khodadade, *Article on the study of the effects of customer desires and tastes in industrial design, a case study of the ceramic industry*, 2nd Conf. Problem Solv. Strateg. Techniq., Tehran, 2006.
- [8] N. Alanchari and N. Tolooei, *Emotional design (Case study: LCD monitor)*, J. Fine Arts: Visual Arts **40** (2010), no. 1, 101–108.
- [9] S. Aliari, M. Chinikar, and A. Masoud Faridizad, *Responsible design, product design to help with psychotherapy*, J. Fine Arts: Visual Arts **26** (2022), no. 4, 111–122.

- [10] S.F. Amiri Aghdaie, S. Maleki, A. Shahin, and A. Ansari, *Proposing the model of consumer emotions in the packaging industry using the structural modeling and interpretative*, Quart. J. Brand Manag. **5** (2018), no. 2, 148–119.
- [11] M. Aslefallah, N. Kolaini Mamaghani, and S. Khalkhali, *Applying Kansei Engineering method on investigating mobile phones' brand image amongst Iranian young designers*, J. Fine Arts: Visual Arts **19** (2014), no. 2, 83–90.
- [12] E. Azad Disfani, *Female interaction, research based innovation*, Glory of Art. Jelvey-y Honar, Alzahra Sci. Quart. J. **8** (2016), no. 1, 43–54.
- [13] G. Azarbouyeh Dinaky and K.H. Ghazizadeh, *The study on the role of illustration in children's toys packaging*, Naghsh Mayeh **5** (2013), no. 14, 51–64.
- [14] H. Azimi and A. Azizollahy, *The effect of consuming experience on consumer-based brand equity (CBBE): A case study of famous smartphone brand clients in the city of Zanjan*, J. Bus. Admin. Res. **11** (2020), no. 22, 149–176.
- [15] M. Babaei Zakliki, Z. Baradaran Sorkhabi, and K. Heidarzadeh, *Designing customer brand Engagement Model with grounded theory approach*, Quart. J. Brand Manag. **5** (2019), no. 4, 41–84.
- [16] E. Bagheri, *Applied concepts of emotional design*, J. Fine Arts: Visual Arts **4** (2012), no. 50, 51–60.
- [17] E. Bagheri, *Applied concepts of affordance theory, from psychology to design process*, J. Fine Arts: Visual Arts **19** (2014), no. 3, 55–64.
- [18] E. Bagheri Taleghani, *Analysis of the concept and application of feedforward in interactive design*, J. Visual Appl. Arts **13** (2020), no. 29, 39–54.
- [19] E. Bagheri Taleghani, R. Afhami, and V. Choopankareh, *Designing multi-level affordance to improve usability of interactive products; Case study: ATM*, J. Fine Arts: Visual Arts **23** (2018), no. 4, 103–112.
- [20] A. Balazadeh and M. Movahedi Jam, *Investigating the emotional design style with a look at the importance of design elements in emotional design*, https://www.researchgate.net/publication/344471539_brrsy_sbk_trahy_ahsas_gra_ba_ngahy_bh_ahmyt_nasr_trahy_dr_trahy_ahsas_gr_a
- [21] M. Barani, *Bringing to life the design of products and its effects on the choice and experience of use with an emphasis on household appliances*, Dastavard **24** (2014), no. 33, 60–68.
- [22] M. Barani and B. Zamani, *Evaluation of the impact of urban furniture quality components on the degree of use of furniture with the user experience approach (UX)*, J. Visual Appl. Arts **11** (2019), no. 22, 105–120.
- [23] M. Barati Pour, *The effect of using an emotional approach in toy design on creating emotional appeal for children*, Twelfth Nat. Conf. Psych. Educ. Sci., Khorasan Shomali–Shirvan, 2022.
- [24] N. Bozorgi Zadeh, K. Hojati Emami, and S. Hoseini, *Feelings reflection on the design of high-heeled Shoes using a novel integrative methodology of Kansei Engineering and Event Tree Analysis (ETA)*, J. Visual Appl. Arts **11** (2018), no. 21, 121–137.
- [25] V. Choopankareh, A. Ajdari, and Z. Hemmatai, *Design based on emotional approach case study: Designing a device for entertainment*, J. Fine Arts: Visual Arts **3** (2011), no. 46, 67–74.
- [26] V. Choopankareh and M. ZorriyAsateyn, *The sprite of artifact*, J. Fine Arts: Visual Arts **1** (2009), no. 39, 103–112.
- [27] S. Dadkhah Fard and S.R. Mortezaei, *Application of behavioral approach in product design based on user center design*, J. Fine Arts: Visual Arts **19** (2014), no. 18, 85–92.
- [28] Z. Dehdashti Shahrokh, A. Kohyari-Haghighat, and A. Ottoofi, *Identifying factors influencing on purchase intention of foreign brand in Iran (Case study: Bosch and Samsung)*, Quart. J. Brand Manag. **1** (2014), no. 1, 75–99.
- [29] N.A. Dehghan, A. Farsi Rad, and M. Gholami, *Explaining the relationship between Product attributes, Customer experience and Brand equity with Purchase intention and Brand loyalty of mobile in Ahvaz city*, New Market. Res. J. **5** (2015), no. 3, 103–120.
- [30] I. Dianat, P. Adeli, and A.H. Talebian, *Ergonomic approaches and challenges in product design*, J. Ergonom. **4**

- (2016), no. 2, 8–16.
- [31] S. Ebrahimi, *Redesigning generic scissors using a user-centered design approach (UCD)*, Dastavard **20** (2010), no. 30, 160–171.
- [32] A. Ebrahimi, M. Jafarzadeh Kenari, and G.H. Bakhshandeh, *Exploring the dual role of consumer purchase experience on her/his repurchase intention of counterfeit and genuine luxury brands*, Quart. J. Brand Manag. **2** (2015), no. 1, 39–66.
- [33] A. Ebrahimi, M. Najafi Seyahroodi, and S.M. Alavi, *Investigating the effect of aesthetic aspect of packaging and its dimensions on purchase intention through packaging preference*, New Market. Res. J. **5** (2015), no. 2, 163–184.
- [34] Z. Erisian and H. Sadeghi Naeini, *Designing for user interfaces of a simulated device for paddling sports: An integrated approach on universal and interaction design*, Stud. Sport Med. **11** (2019), no. 25, 35–58.
- [35] M. Esfidani, S. Abdolapour, and F. Khamoie, *The role of product design in explaining psychological responses of consumers: The role of product involvement and consumption experience*, Manag. Res. Iran **23** (2021), no. 3, 105–127.
- [36] H. Esmailpour, K. Ghayemalaei, H. Saeednia, and F. Haghshenas, *Presentation of conceptual model of customer experience management of brand relation based on foundation data theory*, J. Market. Manag. **13** (2018), no. 39, 19–36.
- [37] S.M.K. EsnaAshari and S.H. Mosaddad, *Survey on the role of product as a logical mediator between designer and user*, J. Fine Arts: Visual Arts **2** (2011), no. 42, 67–74.
- [38] M. Faezi and H. Norouzi, *An investigation of the effective factors on consumers' tendency to purchase from virtual shops (Case study: Alldigital virtual shop)*, Commerc. Strat. **12** (2014), no. 5, 1–14.
- [39] A. Faraji and M. Baktash, *General principles of user experience measurement criteria*, 2nd Int. Conf. Recent Adv. Engin. Innov. Technol., Belgium, 2023.
- [40] A. Faraji and M.R. Rufiger Esfahani, *Designing an interactive and ergonomic wheelchair equipped with a health service system*, Mech. Engin. **31** (2022), no. 4, 11–21.
- [41] S.A. Faregh and Y. Hajian Foroushani, *Phenomenology of the identity concept in the brand audience's lived experience of industrial products with a relational approach to brand management*, Quart. J. Brand Manag. **7** (2020), no. 2, 69–118.
- [42] S.A. Faregh and A.B. Khalkhali, *Humorous products in the emotional design and its role in the relationship between user and product*, Dastavard **29** (2019), no. 42, 36–43.
- [43] S.M.M. Gerami and B. Zangi, *The effect of pattern recognition in the visual perception process on the human-centered design from the perspective of cognitive psychology*, Rahpooye Honar-Ha-Ye Tajassomi **5** (2022), no. 3, 51–62.
- [44] A. Ghafourian Shagerdi, O. Behboodi, and A. Mohammadi Kushki, *The impact of brand community identities and incentives on brand loyalty through online brand interactions (Case study: Pandora brand Instagram users)*, Quart. J. Brand Manag. **8** (2022), no. 4, 169–206.
- [45] T. Ghobadi Lamuki, M. Taheri, F. Latifi, and H. Hajibabaei, *The role of archetypes in brand recognition*, Quart. J. Brand Manag. **6** (2019), no. 1, 241–272.
- [46] M.A. Hadahian and M. Madhoushian Nejad, *Visual evaluation of installation methods of urban furniture by Kansei engineering method, Case studies: Benches in historical-cultural area of Tabriz*, Armanshahr Architec. Urban Dev. **11** (2018), no. 23, 159–171.
- [47] B. Hajipour, G. Khorshidi, and M. Jafarzadeh Kenari, *Designing and explaining the behavior model of counterfeit goods consumers (Products studied: sports shoes, perfume, sunglasses and auto spare parts)*, Quart. J. Brand Manag. **5** (2019), no. 4, 141–182.
- [48] T. Hasangholipoor Yasvari, A. Mosayebi, M. Najafi Siahroudi, and S.M. Alavi, *Investigating the factors influencing customer's attitude to green packaging and their purchasing intention*, Quart. J. Brand Manag. **1** (2014), no. 1, 218–224.

- [49] Gh.E. Hasanpour, N. Andarza, and M. Abdi, *The effects of packaging change on consumers' perception of the product brand*, 5th Nat. Conf. Manag. Econ. Account., Eastern Azarbayjan, Tabriz, 2017.
- [50] Gh. Hashemzade and M.R. Bahrami, *The Impact of Customer's Emotion upon Product Features with Kansei Engineering Approach*, Modiriat-e-farda **15** (2016), no. 47, 1–10.
- [51] Gh. Hashemzade, M.R. Bahrami, and F.S. Yazdani, *Composite pattern of enhancement of quality performance and kansei engineering in emotional design with group decision making models approach*, Modiriat-e- farda **19** (2020), no. 62, 181–194.
- [52] M. Hatami Saeid Abadi, Y. Moheb Shahedin, and S. Mohtasham Amiri, *The importance of the different levels of emotional design in building effective relationship with consumer (Study of practical examples)*, Dastavard **27** (2017), no. 38, 32–41.
- [53] B. Ipaki and Z. Merrikhpour, *Designing bike shift lever with user-centric design approach*, J. Ergon. **6** (2018), no. 3, 43–54.
- [54] R. Jafari, F. Ameri, and N. Khalili, *Effect of some appearance factors on blackness perception of automotive finishes from the customer viewpoint*, J. Color Sci. Technol. **10** (2016), no. 3, 185–193.
- [55] H. Jahangiri and B. Teimouri, *A study of the form and function of Qajar Goblet and decanter as a model for contemporary utensil design*, J. Appl. Arts **1** (2021), no. 1, 108–122.
- [56] N. Jooriyan, E. Siavashi, and B. Siavashi, *Pathology of creative industries based on user innovation approach*, Roshd-e-Fanavari **50** (2017), no. 13, 1–10.
- [57] M.R. Karimi Alavijeh, M. Haghighi, and M. Nazari, *The effects of value creation practices in brand communities on the customer repurchase intention and brand loyalty in social media*, Quart. J. Brand Manag. **7** (2016), no. 4, 181–214.
- [58] M.R. Karimi Alavijeh and N. Zarrinfard, *The impact of expected values from a luxury brand on consumer behavioral consequences*, Quart. J. Brand Manag. **7** (2020), no. 3, 15–51.
- [59] S. Kazemeyni, *Kansei engineering: A method for strategic management in the creation and development of products and services based on design thinking*, First Int. Conf. Manag. Account. Econ., Shiraz, 2015.
- [60] A. Kazemi and G. Bakhshandeh, *Meta-analysis of the factors affecting green products purchase intention (Case study: Researches conducted in Iran)*, Quart. J. Brand Manag. **4** (2017), no. 2, 173–200.
- [61] P. Khashayari and V. Mirabi, *A comparison of consumer behavior towards luxury goods: Online vs. in-store*, Stud. Manag. Entrepreneur. **3** (2018), no. 4, 153–172.
- [62] B. Kheiri and F. Najafi, *Investigating the impact of country of origin on customer behavior: Investigation of the moderating roles of product involvement and product familiarity on product evaluation and customer behavioral intentions*, J. Market. Manag. **7** (2012), no. 17, 37–60.
- [63] A. Khatami Firouzabadi and E. Mazroui, *Applying AHP to QFD to assess customer demands and rank technical and engineering requirements in Shayesteh Carpet Company*, J. Ind. Manag. Perspect. **1** (2011), no. 1, 95–111.
- [64] H. Khodadad Hosseini, A. Moshabaki, and E. Farhadi, *The effect of brand image on conspicuous consumption: Considering mediator role of purchase values, purchase intention and moderator role of gender (A Study of Novin Charm Company)*, Quart. J. Brand Manag. **7** (2021), no. 4, 55–88.
- [65] Y. Khodadadeh and S. Rostamkhani, *Emotional design: Study of the color preferences of Iranian users*, J. Fine Arts: Visual Arts **38** (2009), 97–104.
- [66] Y. Khodadadeh and Sh. Yaghoobian, *Interactive design: Studying the culture of Iranian users to create better interaction with products*, Fine Arts: Visual Arts **29** (2007), no. 29, 79–86.
- [67] K. Khorsandi and F. Cheraghpour Samvati, *Design of the wearable gadget for motion controlling of electrical standing wheelchair for disable people*, Modares Mech. Engin. **22** (2022), no. 4, 281–290.
- [68] N. Koleini Mamaghani and M. Khoram, *The impact and role of emotion in the process of designing an income product on Kansei's engineering methodology*, Int. J. Ind. Engin. Prod. Manag. **19** (2008), no. 10, 151–160.
- [69] N. Koliani Mamaghani and E. Morshedzadeh, *Evaluation of user and products function using interaction design*

- method, *J. Fine Arts: Visual Arts* **2** (2011), no. 41, 95–104.
- [70] N. Koliani Mamaghani, H. Sadeghi Naeini, and Z. Erisian, *Interaction design, the art of facilitating human interaction with products and services*, *J. Iran. Arch. Urban.* **4** (2014), no. 1, 97–108.
- [71] S. Madjidi and E. Faraj Asri, *Semiotics, aesthetics and functionality in product design with emotional minimalism approach*, *J. Fine Arts: Visual Arts* **3** (2011), no. 45, 71–78.
- [72] S. Makkian, *Brand cognitive constructs repertory grids (BCR) with emphasis on consumers' gender in the framework of George Kelly's Theory and Rep test*, *Quart. J. Brand Manag.* **1** (2014), no. 1, 157–192.
- [73] M. Maleki MinBashRazgah and M.A. Siah sarani Kojouri, *A predictive model of behavior of purchasers of Iranian brands by applying the genetic algorithm in optimization of decision tree: Electric appliance industry*, *Quart. J. Brand Manag.* **4** (2017), no. 1, 107–134.
- [74] H. Mirfakhredini, K. Safari, and A. Shabani, *Reviews Customer involvement in new product development in Yazd tile and ceramic industry*, *Quart. J. Ind. Technol. Dev.* **15** (2017), no. 30, 37–46.
- [75] H. Mirfakhredini and A. Shabani, *Customer involvement in new product development*, *J. Bus. Admin. Res.* **8** (2016), no. 16, 121–140.
- [76] N. Moghaddam, *The process of recognition a product*, *Honar-ha-ye Ziba* **37** (2009), 77–86.
- [77] N. Moghaddam and K. Rahayi, *Applying product language as a user interface and technology in new product design (Case study: Home 3D printer)*, *Dastavard* **29** (2019), no. 41, 41–28.
- [78] A. Mohammad Alizadeh, F. Ameri, and S. Moradian, *A review on quantification of visual appearance*, *J. Color Sci. Technol.* **12** (2018), no. 2, 135–146.
- [79] M. Mohammadi Nasab and N. Eskandari, *National brands versus store brands: The effect of affect towards national brands on the affect towards store brands in carpet industry*, *Quart. J. Brand Manag.* **9** (2022), no. 1, 139–186.
- [80] M. Mohammadian, Z. Dehdashti Shahrokh, and M. Lari, *Factors affecting the purchase intention of luxury brands based on generalized theory of planned behavior*, *Quart. J. Brand Manag.* **5** (2018), no. 3, 15–58.
- [81] M. Mohammadzadeh and M. Eghbali, *Analysis of the relationship between design language and mixed reality based smart user interface function*, *J. Fine Arts: Visual Arts* **27** (2022), no. 3, 121–129.
- [82] S.M. Mousavi and S.F. Amiri Aghdaie, *Identifying the constructive elements of "Value Proposition" and their impact on customers' satisfaction using sentiment analysis based on text mining*, *J. Bus. Manag.* **12** (2021), no. 4, 1092–1116.
- [83] S.M. Mousavi and A. Saedi, *Investigating brand's social power base effects on purchase behavior: Mediating role of consumer's product cognitive engagement level*, *Manag. Res. Iran* **21** (2021), no. 3, 217–241.
- [84] M. Naeimi, P. Shokri, R. Sahaf, and H.R. Mokhtarinia, *Enhancing older people's outdoor activities through user-centered (Shopping Bag) product design; A qualitative study based on the user-centered approach*, *Salmand: Iran. J. Age.* **10** (2015), no. 2, 122–129.
- [85] M.H. Namayandegi, *User-centered design process*, *Dastavard* **19** (2008), no. 26, 72–83.
- [86] A. Nasiraei, A.R. Pooya, and M. Lagzian, *Applying the hybrid model of Q-methodology and kansei engineering in identification of customer requests and grouping them*, *J. Ind. Manag. Perspec.* **6** (2016), no. 23, 55–75.
- [87] A. Nazeri, P. Ghafel Mobarakeh, and M. Shafiee, *Using the kansei engineering technique in the comparative study of the emotional influences of designs of the superior gold and jewelry brands on Iranian female students (Case study: 2017 Designs of Tiffany & Co and Cartier Brands)*, *Sci. J. Motaleate-e Tatbiqi-e Honar* **8** (2019), no. 16, 67–80.
- [88] S. Nematizadeh and S.M. Seraji, *Factors of product attractiveness and its effect on customer behavior*, *J. Bus. Manag.* **2** (2010), no. 6, 152–174.
- [89] M. Nourpour and N. Panahi, *Investigating the effect of product quality, brand image, brand trust on customer satisfaction and customer loyalty-a survey study of customers and consumers of Samsung brand smart phones in the 11th district of Tehran*, *Third Int. Conf. Manag. Tourism Technol.*, Tehran, 2021.

- [90] M. Nunjad, A. Mousavi, and M. Ghayedi, *Study of effective factors on customer satisfaction (new model) case study: Electronics and telecommunications industries-Nokia Mobile Phones*, Manag. **6** (2009), no. 13, 56–69.
- [91] B. Pourkhorshidi, *Desk clock design with a user-centered design approach*, Dastavard **24** (2014), no. 33, 11–17.
- [92] F. Pourmand, *The intersubjective horizon of artist and audience in the contemporary interactive art (A glance at an interactive project: The Heart Library)*, Theor. Princ. Visual Arts **2** (2017), no. 1, 61–76.
- [93] S. Rashtchian, A. Gholampour, A. Razagh Shoar, A. Batebi, F.S. Alavi, and H. Sadeghi Naeini, *Evaluation of user interfaces in household products with the approach of consumer satisfaction and pleasant design*, J. Iran. Arch. Urban. **6** (2016), no. 1, 65–79.
- [94] R. Rezaee Arab and M. Nazari, *The influence external signals on perceived quality and purchase intention products of high involvement (Case study: Laptop)*, New Market. Res. J. **4** (2014), no. 2, 209–226.
- [95] H. Rezvani and M. Malek Pour, *Providing a model for categorizing product features*, Commerc. Surv. **7** (2015), no. 35, 58–71.
- [96] M. Rohani Farahmand, *Industrial design role in medical device design*, J. Fine Arts: Visual Arts **18** (2013), no. 1, 1–12.
- [97] H. Sadeghi Naeini, *Basics of ergonomic product design based on psychology: An integrated approach to art and manufacturing*, Theor. Princ. Visual Arts **4** (2020), no. 2, 75–84.
- [98] M. Safar Dezfooli, M. Amiri, and S.R. Mortezaei, *User centered approach to designing an ergonomics backpack for student aged 7-9*, J. Fine Arts: Visual Arts **4** (2012), no. 47, 75–85.
- [99] M. Safar Dezfooli, S.R. Mortezaei, and M. Amiri, *User-centered design (UCD) approach in designing and analyzing school backpacks*, Dastavard **22** (2012), no. 31, 46–51.
- [100] H. Salmani Nodooshan, S. Khakkar, and A. Choobineh, *Designing, making and evaluating an ergonomic pen to increase user comfort and improve posture of hands, wrists, and fingers*, Iran Occup. Health **16** (2019), no. 3, 84–95.
- [101] A. Salmassi, M.R. Karimi Alvije, and M. Nasri, *Identifying the factors related to the intention to buy counterfeit luxury sunglasses from reputable brands in Tehran City*, Commerc. Strateg. **14** (2020), no. 10, 21–34.
- [102] N. Seyyedamiri, M. Jalali, S. Ghamkhar, and A. Davari, *Investigating the impact of social identity, communication appeals, and product classification on brand loyalty*, J. Bus. Manag. **13** (2021), no. 3, 633–654.
- [103] A. Shaabani, S. Mansouri Mohammad Abadi, S.H. Mir Fakhr Oddini, and K. Safari, *The effect of customer involvement on new product development: The mediating role of market outcomes*, Iran. J. Manag. Sci. **11** (2016), no. 44, 57–78.
- [104] M. Shafiee and Z. Davoodi, *Investigation of Persian handmade carpet brand positioning in view of European customers*, Quart. J. Brand Manag. **4** (2017), no. 3, 77–108.
- [105] F. Shamsi, A. Ajdari, N. Mohammad Pour, and A. Esmaili, *Carpet design with a user-oriented approach with the aim of reducing musculoskeletal complications*, Nat. Conf. Art Culture History Prod. Handmade Carpets of Iran and the World, Isfahan, Najafabad, 2011.
- [106] Z. Sheikhi and M. Kaedi, *Reducing user fatigue in customer-oriented product design by combining interactive genetic algorithm and candidate elimination algorithm*, Eighth Int. Conf. Inf. Knowledge Technol., Hamadan, 2016.
- [107] Y. Shirmohammadi, P. Abyaran, Z. Hashemi Baghi, and G. Taleghani, *The effect of brand prestige, brand differentiation, brand experiences, brand social benefits on brand productivity through brand attractiveness and Customer brand identification (Case study of Tabriz leather)*, J. Product. Manag. **14** (2020), no. 1, 117–142.
- [108] B. Soleimani, *Experimental quality and aesthetic perception by users, in interaction with products*, Dastavard **27** (2017), no. 37, 34–41.
- [109] B. Soleimani and M.H. Halimi, *Aesthetic approaches to product design and development*, Month. Sci. J. Bagh-e Nazar **8** (2011), no. 16, 80–92.
- [110] B. Soleimani, A. Mousavilar, and M. Esmaeelzadeh, *Explaining the notion of hermeneutic phenomenology in*

- product design*, Month. Sci. J. Bagh-e Nazar **17** (2020), no. 84, 63–72.
- [111] B. Sohrabi, H.R. Yazdani, A. Rajabzade, and H. Mahjoub, *Defining user basic psychological needs in using interactive products and identifying its elements*, Acad. Librarian. Inf. Res. **54** (2020), no. 1, 39–57.
- [112] S.M. Tabatabaee Nasab, A. Noori, and R. Ebrahimzadeh Pezeshki, *Branding strategy implementation based on personal dimensions of consumer psychology model of the brand (Hybrid approach of KANO model, quality function deployment and PARETO)*, Quart. J. Brand Manag. **1** (2014), no. 1, 101–125.
- [113] A. Tajdini, H. Ahmadi, and Lashgari, *The effect of new product layout on customer satisfaction in wooden household furniture industries using structural equations model in Tehran province, Iran*. J. Wood Paper Sci. Res. **31** (2016), no. 2, 294–308.
- [114] A. Tajedini, M. Maleki Gholandoz, S. Pourmosa, and E Agharafiei, *Identifying and ranking of factors affecting customer satisfaction of the household wood furniture industry by multi-attribute decision making method (Case study: Home furniture)*, Iran. J. Wood Paper Sci. Res. **28** (2014), no. 4, 691–708.
- [115] A. Tajdini, A. Sobhi Nosrat, and S. Pourmousa, *Evaluation of the effective indexes on industrial buyer satisfaction in the supply chain of the home wooden furniture industry in Tehran province, Iran*. J. Wood Paper Sci. Res. **30** (2015), no. 3, 475–490.
- [116] R. Taherian Ojaroud and A. Faraji, *Design of a modular, interactive and ergonomic workbench and chair for jewelry making*, J. Ergon. **9** (2022), no. 3, 19–38.
- [117] F. Talebpour, T. Sabaghpour Arani, and R. Afhami, *A survey of the social behavior and emotional preferences of machine-made carpet costumers in terms of design and color using Kansei engineering*, Theor. Princ. Visual Arts **5** (2020), no. 1, 105–118.
- [118] B. Teimouri and H. Jahangiri, *Analysis of emotion in the design of dough beverage containers*, Dastavard **29** (2019), no. 41, 51–42.
- [119] N. Tolooei and N. Alanchari, *Translating users' emotions to product properties (Case study: Ladies wrist watch)*, J. Fine Arts: Visual Arts **1** (2009), no. 38, 117–126.
- [120] N. Yazdani, *Designing a travel tent that fits the lifestyle of Iranians and with a user-centered design (UCD) approach*, Dastavard **20** (2010), no. 30, 152–159.
- [121] A. Yousefi, and N. Shadmehri, *The importance of child-oriented design education in industrial design*, J. Visual Appl. Arts **12** (2019), no. 24, 49–63.
- [122] M. Zare, H. Sadeghi Naeini, A. Ajdari, and J. Emami, *The effectiveness of positive design in tableware design for Iranian young couples*, Theor. Princ. Visual Arts **6** (2021), no. 1, 160–172.
- [123] M. Ziaei, Z. Mohammadi, S. Izadpanah, A. Besharati, K.H. Zare, and M. Daneshnia, *Comparison of ease of use and local discomfort in using three common models of paper scissors*, Second Int. Conf. Ergon. Iran, Second Biann. Conf. Ergon. Iran, Shiraz, 2015.