Migration Letters

Volume: 21, No: S7 (2024), pp. 550-571

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Perceptions Of Saudi Design Students On The Design Characteristics Of The Logos Of Saudi Arabian National Day And Foundation Day Events

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Abstract

This research aimed to evaluate the perceptions of Saudi design students on the design characteristics of logos designed for Saudi Arabian National Day and Foundation Day. A review of the literature had shown that many variables are used for the evaluation of such perceptions. Out of these variables, all variables relevant to the logo designs of Saudi National and Foundation Days were selected for this survey. An online survey using an Arabic questionnaire yielded 163 responses out of 250 supplied, giving a response rate of 65.2%. The survey responses were analysed for frequency responses and using multivariate analysis. Frequencies of responses indicated mass (mostly about 93%) positive perceptions of the participants on all the design characteristics of the logos of both National and Foundation Days. Such a mass positive perception was attributed to self-report bias arising from aesthetic adaptation and the Saudi Arabian culture and national pride. If this bias were not applicable, the mass positive perception could be due to the deep knowledge of the students about design properties. Linear regressions identified artwork in home to be the positive predictor for perception scores of logo designs in the case of Saudi Arabian National Day and Foundation [1]Day. Limitations of this study arise from the possible biases in responses. The implications of this research are that Saudi design students have a strong sense of the design characteristics of the logos of Saudi Arabian National Day and Foundation Day events. This research can be used to inform the design of future logos for these events, as well as to inform the design of other logos and branding materials related to Saudi Arabia. Futthermore, this research can be used to inform the design of logos and branding materials for other countries and cultures, as it provides insight into how design students perceive the design characteristics of logos.

Keywords: *Design student perception, Design characteristics, National branding, Saudi Arabia.*

Introduction and Literature Review

This section provides an overview of the published works on topics related to the research question addressed by this study: What are the perceptions of Saudi Arabian design students on the aesthetic designs used in the Saudi National and Foundation Day events?

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Basic concepts of aesthetic designs

"Aesthetics is a core design principle that defines a design's pleasing qualities. In visual terms, aesthetics includes factors such as balance, colour, movement, pattern, scale, shape, and visual weight. Designers use aesthetics to complement their designs' usability, and so enhance functionality with attractive layouts." (IDF, 2023).

As per Paul Rand, an art director and graphic designer, "Design is the method of putting form and content together. Design, just as art, has multiple definitions; there is no single definition. Design can be art. Design can be aesthetics. Design is so simple, that's why it is so complicated." (IDF, 2023).

As an example, the aesthetic image of the Saudi national flag fluttering high at night in the sky of the Kingdom, celebrating the Saudi National Day (Arab Stock, 2023), is presented in Fig 1.

Figure 1 Aesthetic image of the Saudi National Flag on Saudi National Day (Arab Stock, 2023).

Findings from the review of literature

General

Relatively attractive, information-rich, and classical art forms related to specific contexts are preferred by viewers, according to Van Schaik and Ling (2009). In this respect, Shahedi, Daud, and Yaacob (2012) noted that the visual perception of users consists of elements like space, form, colour, harmony, rhythm, and repetition. Perceptions of shape, size, material, light and sound emitted from the objects were measured as the elements of design analytics in the survey studies of Petrelli, Soranzo, Ciolfi, and Reidy (2016). Interviews with 24 consumers of different demographic types were done by Negm and Tantawi (2015) to evaluate the impact of visual design on consumers' perceptions towards print advertising. The visual elements of lines, shapes, forms, textures, colours, sizes, values, and spaces of the ads

were the antecedents of the visual elements like photographs, drawings, graphical contents, product names, logos, and colours leading to positive or negative perceptions towards the advertisements. These points are important for colour designs of artistic objects created during Saudi National and Foundation days.

Websites

Out of colour, complexity, and symmetry of applications of Chinese Android websites, survey participants preferred high colourfulness, followed by proper complexity and then slight asymmetry leading to more downloads of such applications (Wang & Li, 2017). Based on a review of the literature and the results of three experiments on Danish students of art and design, Johnson, Lenau, and Ashby (2003) provided a list of descriptors as a general vocabulary in industrial designs. The list for aesthetic vocabulary is as follows-

- Feel: Soft/hard, warm/cold, light/heavy, and flexible/stiff.
- Texture: Smooth/rough, rubbery/slippery.
- Form: Organic, angular, aerodynamic, flat, square, rounded.
- Smell: Fresh/stale, natural/artificial.
- Optics: Transparent/translucent/opaque.
- Colour: Clear/white/muted colours/bright colours/grey/black/metallic/natural
- Taste: Sweet/sour/salty/bitter
- Sound: Mullified/Ringing.

Visual aesthetics influence usability, satisfaction and pleasure from the objects observed. To assess the visual aesthetics of websites, Moshagen and Thielsch (2010) developed the Visual Aesthetics of Website Inventory (VisAWI), based on comprehensive and broad definitions of visual aesthetics. Four interrelated components of perceived aesthetics used in the inventory were simplicity, diversity, colours, and craftsmanship. The model was validated by measuring its validity, reliability, and consistency in survey responses. Images of two websites (Fig 6) used by the authors in this study show the difference in colour clarity of the two websites. The distorted colour of the left-side website can be contrasted with the aesthetically pleasant colour of the right-side website of this picture.

Figure 2 Images of two websites used in this study showing differences in their colours reflecting on the perceived aesthetics (Moshagen & Thielsch, 2010).

In five online experiments, the screenshots of some real websites were analysed by Seckler, Opwis, and Tuch (2015) for the effects of two objective structural factors (vertical symmetry, visual complexity) and three objective colour factors (hue, saturation, brightness) on the different facets of subjective aesthetic perception (simplicity, diversity, colourfulness, craftsmanship) using 194 participants. The Visual Aesthetics of Website Inventory was used for evaluation. Websites with high symmetry, low complexity, blue hue, medium brightness or medium to high saturation

were preferred best. The structural factors were much more important than the colour factors. Both structural factors had a great impact on simplicity, diversity, and craftsmanship. The colour factors impacted colourfulness. Only complexity impacted all facets of subjective aesthetic perception. Other objective design factors had effects on some of the specific facets.

In the studies of Koutsabasis and Istikopoulou (2013), a comparison of aesthetic evaluation of two websites by users and the design teams revealed similar ratings by both users and the design teams for many aesthetic attributes of the two websites. For the first website, both agreed on 13 out of 20 attributes and for the second website, both agreed on nine out of 20 attributes. There were seven aesthetic attributes agreed upon by both groups for both websites. They were the descriptors artistic, overall impression; energetic; pleasant; intriguing; enjoyable; and attractive/appealing. The ratings by users of the aesthetic attributes were significantly lower than the ratings given by the design teams. The second website was rated higher than the first one by both groups. Users suggested improving the resolution, quality of images, uniform fonts, and better colour combinations for the websites. Different aesthetic attributes were important for different purposes. Although the design teams welcomed the suggested improvements, they did not know the reasons for the lower ratings by users. The authors gave some recommendations based on these findings. This is an important point when designing artistic objects for commercial purposes during Saudi National and Foundation days.

Computerised systems

The findings obtained by Tractinsky, Katz, and Ikar (2000) from a survey reiterated the relationship between perceived aesthetics and usability of computerised systems. Both pre- and post-experimental tests showed a strong relationship between perceived aesthetics and perceived usability of the system. However, the degree of aesthetics of the system influenced the post-use perceptions of both aesthetics and usability. But the degree of actual usability did not affect either aesthetics or usability.

Mobile devices

In the studies of Sonderegger and Sauer (2010) the participants rated the mobile phones with attractive design features of visual appearance as more usable than the mobile phones with unattractive design features. The visual appearance of the phone impacted the performance, and the time for task completion. The attractive mobile phones fared better than the unattractive ones in this respect.

In a gender comparison study on smartwatches, Esfahani and Sareh (2021) found that colours, shapes, and materials associated with masculine/feminine characteristics influenced their gendered preferences for brands of smartwatches. Gender-neutral products were more masculine by females. Males attached gender characteristics to the colours of watches preferring black or grey colours with silver-coloured straps. Both unity of form and design symmetry of website interfaces affected the perceived visual aesthetics of webpages in the experimental study by Altaboli and Lin (2012). In the case of gender-segregated Saudi Arabia, gender differences in aesthetic appreciation can be expected to be more pronounced.

Artistic works

In a detailed analysis of cognitive mechanisms to explain the different aspects of aesthetic appreciation of objects, Carbon (2011) provided examples of art objects to illustrate various elements of aesthetic appreciation. A clear distinction between what we like and what we hate has been made from the perspectives of the cognitive domain. There had been works on personal and shared preferences for aesthetic appreciation. Social expectancy theories can explain some of these aesthetic appreciation instances. This is because cultural and social norms shape perceptions of aesthetic materials.

Notwithstanding widely varying findings, the same aesthetic appreciation may be shared by many people. Art history provides some clues on how and why certain artistic streams emerged and led to shared aesthetic appreciation among their observers. Fig 2 demonstrates the similarity of some of Pierre-Auguste Renoir's masterpieces concerning high saturation of blue colour during his work during his visit to Italy in the early 1880s.

Figure 3 Similarity of blue colour used by Pierre-Auguste Renoir in his paintings of the 1880s (Carbon, 2011).

The viewers of these pictures can easily comprehend the common blue colour aesthetics of these paintings. Depending on the cost of materials and contexts, artists may change their styles. However, a change of styles need not change aesthetic appreciation towards them. Aesthetic appreciation of old objects can change with the introduction of new objects like comparison of concept cars and current or previous models. This type of cognitive adaptation contradicts the eternal aesthetic concept. The Classic brand was first introduced in 1993, directly suggesting the concept of "classic" or "eternal" (good) taste comparable to a perfect body shape and thus remains constant. The aesthetic adaptation mechanism can effectively explain the bulk phenomena of changes in aesthetic appreciation towards a new design or art features. Thus, there is a desynchronisation of aesthetic appreciation from old objects to resynchronisation towards new objects. Synchronised aesthetic appreciation is exemplified by the drawings of saints and holy persons producing constant abrasion of certain spots of the artistic objects (Fig 3).

In Fig 3, details of the bronze gates of the Duomo di Milano (Milan cathedral; lower part of the Major Door, planned by L Pogliaghi) demonstrate frequent touching of specific parts of the holy scenes leading to the polishing of these parts over a long period. The polishings were highly selective due to the synchronized visitors' behaviour, especially, the touching of the central and significant mutual soft touch of Jesus' and Maria's hands.

Figure 3 Details of the bronze gates of Milan Cathedral. The lower part of the major door (Carbon, 2011).

Thus, aesthetic adaptation explains the changes in tastes over time. This is illustrated in Fig 4. It illustrates changing appreciation of impressionist to post-impressionist paintings. Taste is
(a) established and stabilized. It lasts until the observers (b) are confronted with innovative new paintings (step 1). In a subsequent adaptation phase (step 2), the observers (c) adapt their aesthetic appreciation towards the new paintings integrating them into their visual habits. The appreciation space (d) continuously returns, establishes, and stabilises taste again. The different themes of Saudi National and Foundation days in different years require aesthetic adaptation from the appreciation of the earlier aesthetic designs to the new ones.

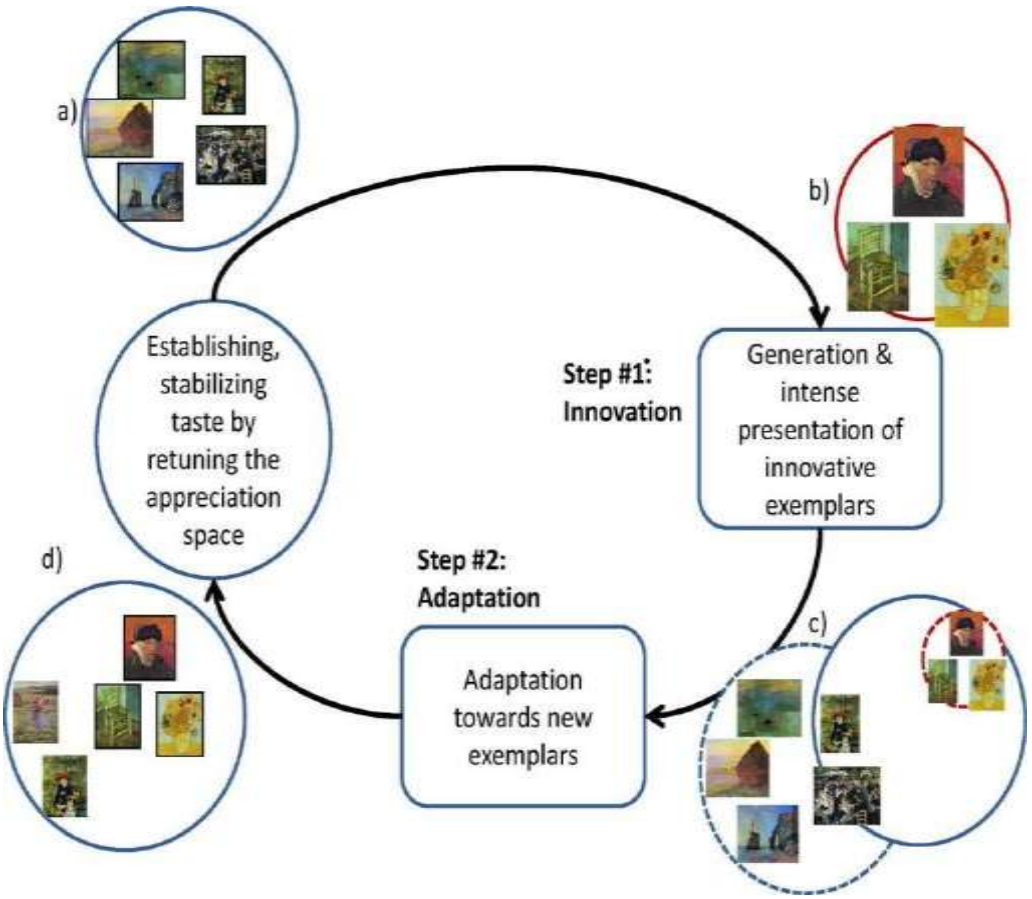

Figure 4 Two-step model of the dynamics of aesthetic appreciation (Carbon, 2011).

Aesthetic perception of 400 destination pictures posted with the popular hashtag #beautifuldestinations on Instagram was explored by Hauser, Leopold, Egger, Ganewita, and Herrgessell (2022) through a survey of 200 participants. The pictures were examined based on their perceived aesthetics of the portrayed content and the perceived influence of five selected visual elements of design (colour, light, line, angle of view, and focus). The perceived influence of these five aesthetic visual elements was different for different types of destination pictures. The pictures showing natural elements were perceived to be aesthetically more pleasing than pictures showing man-made elements. Thus, the content of pictures influenced the aesthetic perception of destination pictures. The main tourist attractions of Saudi Arabia are its three holy sites. The pictorial presentation of these and other tourism destinations of the country will determine the tourist inflows and foreign exchange earnings from it. The findings of this study point to the need for care in this aspect.

Others

From a systematic review of the literature, Ahmad Nia and Atun (2016) proposed an aesthetic design thinking model for urban structures. The model was used to study the effects of built and non-built environmental factors of urban spatial configuration on human aesthetic perception. The study showed that aesthetic response to the environment comes from the communication between contemplative feelings, sensual desire, and an immediate state of involvement. The organisational factors of a built environment were the main source of aesthetic judgment due to their arousal potential. The positive or negative aesthetic response may occur depending on the extent of complexity or contradiction. Aesthetic cognition occurs in four stages: objective elements, organisational factors for arousal potential, subjective factors obtained from the environmental configuration, and the human aesthetic response to the environment. Saudi Vision 2030 (Saudi Arabia, 2016) might lead to faster urbanisation of its population. The need for aesthetic designs in the urbanisation process is evident. The

four stages of aesthetic cognition apply to Saudi people also.

The cultural analytics method for media analysis (like social media posts) followed by the California Institute for Telecommunications and Information Technology (Calit2) was described by Reyes and Manovich (2020). One of its applications is the cultural visualisation of art objects in exhibitions. Specific image processing methods are used to convert data into new visualizations and to make aesthetic decisions. This helps the viewers reflect on the huge number of images surrounding them in their daily lives. This technique can be extended to Saudi designs of national and foundation days, as the Islamic cultural element is imprinted upon any Saudi cultural product.

Summary

The findings from the reviewed papers are summarised here. Aesthetic design variables in various contexts, the factors related to aesthetic perceptions, changes in aesthetic perception over time, and different ways of analysing the effects of designs on the aesthetic perceptions of viewers/users were discussed. Some of these findings were related to the Saudi Arabian context.

Despite an extensive search for research on aesthetic perceptions of artistic objects and the aesthetic designs used for Saudi National and Foundation days, no research paper relevant to this study was available. This means the present study is a novel one.

Aim and objectives of this study

Based on the above review, a quantitative questionnaire survey was done to answer the research question: What are the perceptions of Saudi design students on the aesthetic designs used in the Saudi National and Foundation Day logos?

Methodology

Questionnaire survey, population, and sampling

The available literature and the design practices of people in Saudi national and foundation days were observed. This knowledge was used to design a draft questionnaire. The draft was discussed with experts and refined into an improved draft. The improved draft was piloted among 10 ex-design students at the University. They filled up a feedback sheet and returned it along with the completed questionnaire. The feedback sheet contained their views on the appropriateness of the language, the presence of any objectionable language or item, any item to be added or deleted, any mistake to be corrected and the time taken to fill up the questionnaire. Based on their feedback, further improvements were made to the questionnaire, and it was finalised. The questionnaire at all stages was in Arabic as all the participants were Saudi students.

The total number of undergraduate students in Saudi Arabia are over 100,000. The exact number of design students is not known. The population of design students in Saudi Arabia was sampled from Umm Al-Qura University. The total population of undergraduate design students are the University are around 250.

The questionnaire was set up in google forms and distributed by email to about 250 design students of Umm Al-Qura University, consisting of both male and female students, all doing their bachelor's degrees. Usable responses were 163, giving a response rate of 65.2%, which is at high levels.

Data analysis

Tests of internal consistency and normality were done. Frequencies of responses were tabulated. Descriptive statistics were given as mean or median depending on the distribution of the variable. The main multivariate technique used for the analysis was stepwise multiple linear regression. A level of significance of .05 was used.

Ethical compliances

All ethical requirements of both the university and Saudi Arabian government were fully met.

Results

Descriptive statistics

Table 1 provides the demographic profile of the participants.

Table 1. Demographic profile of the Saudi design students in the survey.

Variable	Category	Valid frequency	Percent	Cumulative frequency
Gender	Female	34	20.9	20.9
	Male	129	79.1	100
Age	17-19	78	47.9	47.9
	20-23	85	52.1	100
Year of Study	2nd Year	78	47.9	47.9
	3rd Year	85	52.1	100
Grade in the previous year	A	77	47.2	47.2
	A+	32	19.6	66.9
	A++	3	1.8	68.7
	B	25	15.3	84
	B+	14	8.6	92.6
	B++	12	7.4	100
Artistic talent in the family	No	114	69.9	69.9
	Yes	49	30.1	100
Artwork in home	No	46	28.2	28.2
	Yes	117	71.8	100
Familiar with Saudi National Day designs	No	12	7.4	7.4
	Yes	151	92.6	100
Familiarity with Saudi Foundation Day designs	No	12	7.4	7.4
	Yes	151	92.6	100

About 79% of the participants were male students, in the age range of 17 to 23, in their 2nd or 3rd year of bachelor's degree, mostly (68.7%) scoring A grades. Although there were no artistic talents in the homes of about 70% of the students, artworks were kept in their homes. Thus, about 93% of them were familiar with Saudi National Day and the Foundation Day designs. All students explained their familiarity with National Day designs using positive epithets on the features, colour, design details, emphatic expressions of the relevant day, animation, visual impact, graphics, culture, outlook, glorification of Saudi Arabia, flag and other symbols, traditions, values, realism, precision, greatness, spectacular nature, instant and unique effects, Saudi national pride, perspectives, and identity, promotion of unity, attractiveness, balanced mixture of tradition and modernity, reflections of ideas, imagination, and the nation, perfection,

skilful and updated design, appropriateness to the occasion, influencing, informative, prominence and imagination. In the case of the Foundation Day design, the perceptions were mixed. There were eight responses expressing inadequacies and over-representation of tradition in the designs. The remaining responses used epithets like those in the case of National Day designs.

Specific design characteristics related to National Day

The response frequencies relating to the design student perception of the design characteristics for the National Day are shown in Table 2. Table 2. Frequency responses on the perception of design characteristics for the National Day.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The idea and concept of the logo reflect the national identity. - National Day	0	3	9	57	94
	0.00%	1.84%	5.52%	34.97%	57.67%
Reference to the elements and shapes used in the logo is from the national heritage. - National Day	0	0	12	58	93
	0.00%	0.00%	7.36%	35.58%	57.06%
The symbol and the logo represent the identity of Saudi Arabia - National Day	0	11	1	38	113
	0.00%	6.75%	0.61%	23.31%	69.33%
The shapes, symbols and graphics used in designing the structure of the logo reflect the national identity. - National Day	0	7	5	43	108
	0.00%	4.29%	3.07%	26.38%	66.26%
The graphics, shapes and symbols used in the logo are consistent and balanced. - National Day	0	0	12	40	111
	0.00%	0.00%	7.36%	24.54%	68.10%
There is a good relationship between the colours used in the logo with the national identity. - National Day	0	9	3	59	92
	0.00%	5.52%	1.84%	36.20%	56.44%
There is consistency and colour harmony in the logo. - National Day	0	12	1	42	108
	0.00%	7.36%	0.61%	25.77%	66.26%
The size and shape of the fonts used in the logo reflect the national identity. - National Day	0	0	16	49	98
	0.00%	0.00%	9.82%	30.06%	60.12%
The colours, sizes and patterns of the fonts are consistent and balanced. - National Day	0	0	12	44	107
	0.00%	0.00%	7.36%	26.99%	65.64%
The consistency and rhythm of phrases supporting the slogan are successful in producing the appropriate designs. - National Day	0	12	0	45	106
	0.00%	7.36%	0.00%	27.61%	65.03%
The elements and shapes used in the logo were taken from the modern future projects of Vision 2030. - National Day	0	0	12	46	105
	0.00%	0.00%	7.36%	28.22%	64.42%
The external and internal design lines are consistent with each other. - National Day	0	12	0	45	106
	0.00%	7.36%	0.00%	27.61%	65.03%
The colours correlate with the nature of the area. - National Day	0	12	0	0	151
	0.00%	7.36%	0.00%	0.00%	92.64%
The size of the design fits the proportions between its parts and the product and its function. - National Day	0	12	2	51	98
	0.00%	7.36%	1.23%	31.29%	60.12%
The design is associated with the identity and culture of the country. - National Day	0	0	12	0	151
	0.00%	0.00%	7.36%	0.00%	92.64%
The exterior design of the designed shape matches the function of the product. - National Day	0	0	18	44	101
	0.00%	0.00%	11.04%	26.99%	61.96%
The design achieves the element of originality and innovation. - National Day	0	0	18	5	140
	0.00%	0.00%	11.04%	3.07%	85.89%

The response frequencies of the Saudi design students on the idea and concept of the logo of Saudi National Day are presented in Table 2. About 93% of the students either agreed or strongly agreed on the idea and concept of the logo. Nine participants did not have any opinion. Only three of them disagreed with the suggestion.

In Table 2, the frequency responses of the logo representing the Saudi identity are given. Whereas 11 students did not agree that the logo represented the identity of Saudi Arabia, 92.7% of the students either agreed or strongly agreed that the logo did represent the identity of Saudi Arabia.

The frequency responses of Saudi design students on the shapes, symbols and graphics used in designing the structure of the logo reflecting the national identity are presented in Table 2. In the survey, seven participants disagreed and five were neutral to the suggestion. The rest of them (about 93%) agreed or strongly agreed with the suggestion on the shapes, symbols and graphics of the logo structure reflecting the national identity.

In Table 2, the survey responses of Saudi design students on the graphics, shapes and symbols of the logo being consistent and balanced are given. None disagreed with the suggestion. However, 12 of the participants were neutral to the suggestion. The remaining 93% agreed or strongly agreed that the graphics, shapes, and symbols of the logo are consistent and balanced.

The survey responses on the relationship between the colours used in the logo and the national identity are presented in Table 2. Nine students did not see any such relationship. Three students could not decide. The rest 93% of the students agreed or strongly agreed about the relationship.

Table 2 provides the data on the survey responses of Saudi design students on the consistency and colour harmony in the logo of the National Day. It shows that about 92% of the survey participants felt that there is consistency and colour harmony in the National Day logo. No such consistency was found by 12 students. Only one student could not decide on the issue.

The frequency responses of Saudi design students on the reflection of national identity due to the size and shape of the fonts used in the area are presented in Table 2. None disagreed with the suggestion. About 90% of the participants agreed or strongly agreed that the size and shape of the fonts used in the logo reflected the national identity. About 9.8% of the participants remained neutral to the suggestion.

Table 2 provides the frequency responses of Saudi design students on the consistency and balanced nature of the Saudi National Day logo due to the colours, sizes and patterns of fonts used. None had any negative opinions. About 7.4% of participants remained neutral to the suggestion. About 93% of the participants agreed or strongly agreed that the consistency and balanced nature of the Saudi National Day logo was enhanced by the colours, sizes and patterns of the fonts used.

Table 2 provides the frequency responses of Saudi design students on how the designs of logos were produced appropriately by using consistent and rhythmic phrases in the supporting slogans. None had any neutral stand. About 7.4% of the participants disagreed with the suggestion. On the other hand, for about 93% of the participants, the designs of the logo were produced appropriately by using consistent and rhythmic phrases in the supporting slogans.

In Table 2, the frequency responses of Saudi design students on the statement: The elements and shapes used in the logo were taken from the modern future projects of Vision 2030, are given. None disagreed with the statement, while 7.4% of the respondents were neutral. About

93% of respondents agreed or strongly agreed that the elements and shapes of the logo were taken from the modern future projects of Vision 2030.

Table 2 presents the frequency responses of Saudi design students on the consistency of external and internal designs of the Saudi National Day logo. The participants either disagreed or agreed. While about 7.4% of participants disagreed with the suggestion, about 93% of participants agreed or strongly agreed that there is a consistency of external and internal lines of the logo.

Table 2 gives the frequency responses of Saudi design students on the relationship between the colours of the logo and nature of the area. According to the data in Table 2, participants either remained neutral or strongly agreed with the statement. While 7.4% of them were neutral, about 93% of them strongly agreed that the colours of the logo correlated with the nature of the area.

Table 2 provides the frequency responses of Saudi design students related to the statement: The size of the design fits the proportions between its parts and the product and its function. Only one participant remained neutral to the statement. About 7.4% of participants did not find the size of the design fit the proportion between its parts and the product and its function. On the other hand, 91.3% of the participants did find the size of the design fit the proportion between the parts and products and the function of the logo.

Frequency responses of Saudi design students on the relationship of the design with the identity and culture of the country, are given in Table 2. Only neutral (7.4%) and strongly agree (92.6%) responses were given for this variable.

Table 2 provides the frequency responses of Saudi design students on the matching of the exterior design with the logo's function. There was no disagreement with the statement. About 11% of the respondents remained neutral. About 89% of respondents agreed or strongly agreed that the exterior designed shape matched the logo's function.

In Table 2, the frequency responses of Saudi design students on achievement of originality and innovation by the logo design, are presented. There was no disagreement with the suggestion. About 11% of the respondents remained neutral. About 89% of respondents either agreed or strongly agreed that the design of the logo achieved originality and innovation.

Specific design characteristics related to the Foundation Day logo

The survey responses to items related to the design characteristics of the Foundation Day logo are described in Table 3.

Table 3. Frequency responses on the perception of design characteristics for the Foundation Day.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The idea and concept of the logo reflect the national identity. - Foundation Day	0	3	9	58	93
	0.00%	1.84%	5.52%	35.58%	57.06%
Reference to the elements and shapes used in the logo is from the national heritage. - Foundation Day	0	0	12	57	94
	0.00%	0.00%	7.36%	34.97%	57.67%
The symbol and the logo represent the identity of Saudi Arabia - Foundation Day	0	11	1	38	113
	0.00%	6.75%	0.61%	23.31%	69.33%
The shapes, symbols and graphics used in designing the structure of the logo reflect the national identity. - Foundation Day	0	7	5	43	108
	0.00%	4.29%	3.07%	26.38%	66.26%
The graphics, shapes and symbols used in the logo are consistent and balanced. - Foundation Day	0	0	12	41	110
	0.00%	0.00%	7.36%	25.15%	67.48%
There is a good relationship between the colours used in the logo with the national identity. - Foundation Day	0	9	3	44	107
	0.00%	5.52%	1.84%	26.99%	65.64%
There is consistency and colour harmony in the logo. - Foundation Day	0	12	1	43	107
	0.00%	7.36%	0.61%	26.38%	65.64%
The size and shape of the fonts used in the logo reflect the national identity. - Foundation Day	0	0	19	47	97
	0.00%	0.00%	11.66%	28.83%	59.51%
The colours, sizes and patterns of the fonts are consistent and balanced. - Foundation Day	0	0	12	42	109
	0.00%	0.00%	7.36%	25.77%	66.87%
The consistency and rhythm of phrases supporting the slogan are successful in producing the appropriate designs. - Foundation Day	0	12	0	45	106
	0.00%	7.36%	0.00%	27.61%	65.03%
The elements and shapes used in the logo were taken from the modern future projects of Vision 2030. - Foundation Day	0	0	12	44	107
	0.00%	0.00%	7.36%	26.99%	65.64%
The external and internal design lines are consistent with each other. - Foundation Day	0	12	0	42	109
	0.00%	7.36%	0.00%	25.77%	66.87%
The colours correlate with the nature of the area. - Foundation Day	0	0	12	0	151
	0.00%	0.00%	7.36%	0.00%	92.64%
The size of the design fits the proportions between its parts and the product and its function. - Foundation Day	0	12	2	49	100
	0.00%	7.36%	1.23%	30.06%	61.35%
The design is associated with the identity and culture of the country. - Foundation Day	0	0	12	0	151
	0.00%	0.00%	7.36%	0.00%	92.64%
	0	0	18	45	100

The exterior design of the designed shape matches the function of the product. - Foundation Day	0.00%	0.00%	11.04%	27.61%	61.35%
The design achieves the element of originality and innovation. - Foundation Day	0	0	18	45	100
	0.00%	0.00%	11.04%	27.61%	61.35%

Table 3 provides the frequency of responses by Saudi design students on the statement: The idea and concept of the logo reflect the national identity on Foundation Day. Only three participants refused to agree with the statement. Another nine participants remained neutral. The remaining 92.6% of the participants agreed or strongly agreed that the idea and concept of the logo reflected the national identity on Foundation Day.

In Table 3, the frequency of responses related to the statement: Reference to the elements and shapes used in the logo on Foundation Day is from the national heritage, are given.There was no disagreement with the statement. While 12 participants were neutral, about 92.7% of the participants agreed or strongly agreed that the elements and shapes used in the Foundation Day logo were from the national heritage.

Table 3 presents the survey responses of Saudi design students on the statement: The symbol and the logo of Foundation Day represent the identity of Saudi Arabia. While 11 participants disagreed with the suggestion, only one remained neutral. About 93% of the participants felt that the symbol and the logo of the Foundation Day represented the Saudi national identity.

The frequency responses of Saudi design students on the statement: The shapes, symbols and graphics used in designing the structure of the logo of Foundation Day reflect the national identity, are presented in Table 3. Seven students disagreed and five were neutral to the suggestion. About 93% of students agreed or strongly agreed that the shapes, symbols, and graphics used in designing the structure of the logo of Foundation Day reflected the national identity.

In Table 3, the survey responses of Saudi design students on the statement: The graphics, shapes and symbols used in the logo of Foundation Day are consistent and balanced, are given. There was no disagreement with the statement. While 12 students remained neutral, about 93% of the students agreed or strongly agreed that the logo of Foundation Day was consistent and balanced concerning the graphics, shapes and symbols used.

Table 3 presents the frequency responses of Saudi design students on the statement: There is a good relationship between the colours used in the Foundation Day logo with the national identity. Nine students disagreed and three were neutral. About 93% of students agreed or strongly agreed on the good relationship between the colours of the Foundation Day logo with the national identity.

Table 3 shows the frequency responses of Saudi design students on the statement: There is consistency and colour harmony in the Foundation Day logo. Twelve students disagreed and one student was neutral to the statement. About 92% of the students agreed or strongly agreed with the consistency and harmony of the Foundation Day logo.

Frequency responses of Saudi design students on the statement: The size and shape of the fonts used in the Foundation Day logo reflect the national identity, are presented in Table 3. Nineteen students were neutral, while about 89% of students agreed or strongly agreed that the size and shape of the fonts used in the Foundation Day logo reflected the national identity.

Frequency responses of Saudi design students on the statement: The colours, sizes and patterns of the fonts in the Foundation Day logo are consistent and balanced, are given in Table 3. None disagreed. Twelve students were neutral. About 93% of the students agreed that the colours, sizes, and patterns of the fonts in the Foundation Day logo were consistent and balanced.

Table 3 provides the frequency responses of Saudi design students on the statement: The consistency and rhythm of phrases supporting the slogan are successful in producing the appropriate designs for the Foundation Day logo. There was no neutral stand. Twelve students disagreed with the statement. About 93% of the

students agreed or strongly agreed that the consistency and rhythm of phrases supporting the slogan were successful in producing the appropriate designs for the Foundation Day logo.

In Table 3 are given the frequency responses of Saudi design students on the statement: The elements and shapes used in the Foundation Day logo were taken from the modern future projects of Vision 2030. There was no disagreement. Twelve students were neutral to the statement. About 93% of the students agreed or strongly agreed that the elements and shapes used in the Foundation Day logo were taken from the modern future projects of Vision 2030.

Table 3 provides the frequency responses of Saudi design students on the statement: The external and internal design lines of the Foundation Day logo are consistent with each other. Twelve students disagreed and the remaining 151 students (93%) agreed or strongly agreed that the external and internal design lines of the Foundation Day logo are consistent with each other.

Table 3 provides the frequency responses of Saudi design students on the statement: The colours in the Foundation Day logo correlate with the nature of the area. Either 7.4% remained neutral or 151 students strongly agreed that the colours in the Foundation Day logo correlated with the nature of the area.

Table 3 shows the frequency of responses of Saudi design students on the statement: The size of the Foundation Day logo design fits the proportions between its parts and the product and its function. Twelve students disagreed with the statement. Two students were neutral. About 91.4% of students agreed or strongly agreed that the Foundation Day logo design fitted the proportions between its parts and its functions.

Table 3 shows the frequency of responses from Saudi design students on the statement: The design of the Foundation Day logo is associated with the identity and culture of the country. Twelve students were neutral and the remaining 151 students strongly agreed that the design of the Foundation Day logo was associated with the identity and culture of the country.

Table 3 shows the frequency of responses from Saudi design students on the statement: The exterior design of the designed shape matches the function of the product. About 11% of students were neutral to the suggestion. The remaining 145 students (89%) agreed or strongly agreed that the exterior design of the designed shape matched the function of the product.

Table 3 shows the frequency of responses from Saudi design students on the statement: The design of the Foundation Day logo achieves the element of originality and innovation. While 11% of students were neutral, about 89% of them agreed or strongly agreed that the design of the Foundation Day logo achieved the element of originality and innovation.

Overall, Table 3 shows that most Saudi design students had favourable perceptions of all aspects related to the design characteristics of logos made for Saudi National and Foundation days.

Cronbach's alpha

The estimated Cronbach's alpha for items of responses to design characteristics of logos of
Saudi National Day and Foundation Day are given in
Table 4. Table 4. Cronbach's alpha

Scale	Items	Cronbach's Alpha

Perceptions about the design characteristics of National Day	17	.965
Perceptions about the design characteristics of Foundation Day	17	.964

Both Cronbach's alpha values were well above the stipulated minimum of 0.7. Hence, the items related to both have high reliability.

Variable Scoring and Tests of Normality

Two scores were derived from the individual items relating to the design characteristics of the National Day and Foundation Day designs. The respective scores were computed as average of the 17 individual items, where, a score of 1 indicates highly unfavourable perception and a score of 5 indicates highly favourable perception. The two scores were called Perception of Design Characteristics for National Day Score, and Perception of Design Characteristics for Foundation Day Score.

A Shapiro-Wilk test of normality ($p<.001$) and an inspection of the histograms for these two scores indicated the scores are not normally distributed.

The medians for the two scores are summarized in Table 5.

Table 5. Variable score medians

Score	Median (IQR)
Perception of Design Characteristics for National Day Score	4.76 (IQR=.18)
Perception of Design Characteristics for Foundation Day Score	4.76 (IQR=.24)

Can the perception of design characteristics for National and Foundation Days be predicted using the student demographics?

A stepwise multiple linear regression model was developed with the Perception of Design Characteristics for National Day Score as the dependent variable, and all student demographics as the independent variables. The results of the analysis indicates that having artwork at home accounted for a significant proportion of the Perception of Design Characteristics for National Day Score, $R^2 = .18$, $F(1, 161) = 35.302$, $p<.001$. The independent variable included in the model explains approximately 18% of the variance in the Perception of Design Characteristics for National Day Score, and is positively associated with the dependent variable.

Table 6. Perception of Design Characteristics for National Day Score Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	4.187	.076		54.905	<.001

Artwork in home=Yes	0.535	.090	0.424	5.942	<.001

a. Dependent Variable: Perception of Design Characteristics for National Day Score

Another stepwise multiple linear regression model was developed with the Perception of Design Characteristics for Foundation Day Score as the dependent variable, and all student demographics as the independent variables. The results of the analysis indicates that not having artwork at home accounted for a significant proportion of the Perception of Design Characteristics for Foundation Day Score, $R^2 = .181$, $F(1, 161) = 35.494$, $p<.001$. The independent variable included in the model explains approximately 18.1% of the variance in the Perception of Design Characteristics for Foundation Day Score, and is negatively associated with the dependent variable.

Table 7. Perception of Design Characteristics for Foundation Day Score Model Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	4.713	0.048		98.680	<.001
Artwork in home=No					

Dependent Variable: Perception of Design Characteristics for Foundation Day Score

Discussions

This paper aimed to evaluate the perceptions of Saudi design students on the design characteristics of logos for Saudi National and Foundation Days. Survey responses from 163 students showed that most students had positive perceptions about various aspects of the design characteristics related to these logos.

Many papers list the characteristics of artworks which generate positive perceptions in viewers. Relatively attractive, information-rich, and classical art forms related to specific contexts were preferred by viewers, according to Van Schaik and Ling (2009). According to Shahedi, Daud, and Yaacob (2012), the visual perception of users consists of elements like space, form, colour, harmony, rhythm, and repetition. Perceptions of shape, size, material, light and sound emitted from the objects were measured as the elements of design analytics in the survey studies of Petrelli, Soranzo, Ciolfi, and Reidy (2016). Interviews with 24 consumers of different demographic types were done by Negm and Tantawi (2015) to evaluate the impact of visual design on consumers' perceptions towards print advertising. The visual elements of lines, shapes, forms, textures, colours, sizes, values, and spaces of the ads were the antecedents of the visual elements like photographs, drawings, graphical contents, product names, logos, and colours leading to positive or negative perceptions towards the advertisements. Except for the light and sound aspects, other characteristics used in logo designs were perceived by the Saudi design students in this study. Thus, there is a large extent of agreement between the findings obtained in this study and those of others.

Especially, the list given by Johnson, Lenau and Ashby (2003) applies to the design characteristics of websites, except for sound and taste, identified for logos by the Saudi design students of this study. The importance of colour clarity is evident from the images given by Moshagen and Thielch (2010). Many items related to colour were listed by the participants of this study under the questionnaire items: Familiarity with Saudi National Day designs and Familiarity with Saudi Foundation Day designs.

Although 21% of the participants were female students, no gender comparison was made in this study despite Esfahani and Sareh (2021) finding gender differences in perceptions of the designs of mobile devices. Carbon (2011) differentiated between what we like and what we hate. In this study, hate was not measured. But disagreement with some given statements may sometimes be related to hatred.

If aesthetic adaptation theory applies to this study, some of the positive perceptions could be due to such an adaptation, although Carbon (2011) applied this mechanism to change from old to new designs. The perception changes from the logo design of one year to that of another year may be explained using the adaptation mechanism.

Although different types of pictures (in this case, the logos of National Day and Foundation Day) may be different as was noted by Hauser et al (2022) for hashtags in Instagram, there were striking similarities in the perceptions of the logos related to National Day and Foundation Day in this study. Ahmed Nia and Atun (2016) observed that aesthetic response to the environment comes from the communication between contemplative feelings, sensual desire, and an immediate state of involvement. What applies to the environment may apply to logos also. Thus, the perceptions of Saudi students on the two logo designs may have arisen from their communication between contemplation, feelings, sensual desire, and the recognition of their national importance. That also means they did not want to criticise what was important for the nation. If this is true, this factor would have biased the perceptions towards positive aspects. In that case, some of the positive perceptions expressed by the students in this study might not have been biased. The large percentage of about 93% responding positively for almost all design characteristics of both logos needs to be evaluated with this possibility in mind. Largely, Saudi culture and national pride have been reflected in the survey responses of Saudi design students in this study.

Conclusions

This study tried to answer the question: What are the perceptions of Saudi design students on the aesthetic designs used in the Saudi National and Foundation Day logos?

Most Saudi design students perceived positively all aspects of the design characteristics of logos associated with Saudi National Day and Foundation Day. This is the summarised answer to the question. These findings could be explained using aesthetic adaptation mechanisms and the culture and national pride of the participants.

Artwork in home was a significant predictor of perception scores for both National Day and Foundation Day. However, the relationship of artwork in home for the perception score of Foundation Day was negative.

Limitations

As was pointed out in the discussion section, the self-report bias of adaptation mechanism and national culture and pride would have led to the mass positive perception among the design students. This can be evaluated only by evaluating their perceptions of the logos of a different and dissimilar country.

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