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## Examining How Design Elements Influence Student Trust and Satisfaction in Educational Websites: A Case Study at Al-Zaytoonah University of Jordan

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### Abstract

*Website designers prioritize user preferences to enhance experience, satisfaction, and trust. Design elements play a key role in shaping effective educational websites. This study examines how the Al-Zaytoonah University of Jordan website's design elements—such as fonts, images, colors, and menus—affect student trust and satisfaction. A survey of 1,215 students revealed a strong positive impact of these elements on user perception. The findings revealed a substantial positive influence of the website's design elements, including font, images, colors, and menus, on the trust and satisfaction of Al-Zaytoonah University of Jordan students. The study recommends a comparative analysis between a government university's website, a Western university's website, and Al-Zaytoonah University's website to assess design influence. Additionally, an annual user evaluation is suggested to ensure continuous improvement.*

**Keywords:** website; trust, satisfaction; colour; image; font

### Introduction

The 21st century is currently experiencing rapid advancements in the fields of information and communication technology (ICT) and educational technology, driven by the widespread use of the Internet and associated technologies for transmitting live audio and video content (Abduljawad et al., 2020). This has resulted in a significant explosion of knowledge and has greatly enhanced the accessibility and speed at which information can be obtained, regardless of one's location or the time of day (A. Alsswey, Malak, & El-Qirem, 2024).

These electronic technologies have enabled students to transition from the traditional learning environment, characterized by memorization and indoctrination, to a more active self-learning role (Jaber et al., 2021; Saar, Prieto, & Rodríguez Triana, 2022). They have also redefined the role of teachers from mere prompters to guides, facilitators, and mentors for students. Websites, especially educational ones, have played a pivotal role in the shift from traditional to electronic education, particularly during the COVID-19 pandemic (Bustamante, Segura-Berges, Lizalde-Gil, & Peñarrubia-Lozano, 2022). They have expanded the range of educational models and transformed education into a fully digital experience, providing numerous educational resources and facilitating interaction between students and teachers. Students were able to communicate

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and collaborate with each other, with e-learning platforms playing a significant role in this rapid transformation (Derbas, Al-Ramahi, Hnaif, Alrawashdeh, & Mubaideen, 2023).

Despite the essential role of these websites in the educational process, some drawbacks in their performance and design have caused reluctance among various user groups, including students and teachers. It became imperative to conduct studies to assess the design issues and identify the factors affecting their use. Al-Zaytoonah University of Jordan, like other Jordanian universities, transitioned to full e-learning during the COVID-19 pandemic through its website. Consequently, an evaluation of this site was necessary to identify its strengths and weaknesses, with the aim of enhancing it to positively impact the educational process in all its facets (Derbas et al., 2023).

The graphic design elements of university websites play an important role in the user's life during use, whether these websites are educational, commercial, or service (Kuo, Chang, & Lai, 2022). However, it is noted from (i.e. Ahmad, Jawad, & Jaber, 2022; Li & Shang, 2020; Mathur et al., 2019; Qalati et al., 2021) ) that many users are dissatisfied and reluctant to use these websites of all kinds, and this is due to the weakness and misuse of graphic design elements. Such as color, images, menus, font type and size, and omitting some other elements such as symbols and logos. In addition to the scarcity of evaluation studies that are conducted after the completion of website design to take feedback from users about the use of these sites, and attempt to develop and improve these sites to suit the needs of users, whether in terms of general design or the services they provide. Which led to many users refraining from using it. Therefore, there was a need to conduct studies to evaluate users' opinions regarding the use of these sites with the aim of improving and developing them, because of their economic, social and educational dimensions for institutions and individuals. Hence the importance of conducting this study on the Al-Zaytoonah University of Jordan website to evaluate students' trust and satisfaction towards using the website, and to come up with results and recommendations with the aim of developing the website's design.

## **Literature Review**

### **AL-zaytoonah university website**

Al-Zaytoonah University of Jordan was established in 1993. Since its founding, it has sought to prepare the student scientifically and morally, so that he will be able to fulfill his responsibility in serving his homeland and nation. Al-Zaytoonah University of Jordan provides its own website on the Internet: [www.zuj.edu.jo](http://www.zuj.edu.jo) that the student or employee can access easily. The site contains many pages and lists related to the university, employees, students, and others. The website provides the student wishing to register at the university with an electronic registration service, as well as for current students. The student can also find out a lot of information about his academic achievement, exam dates, borrow books from the library, and others. The site also provides a special page in the list for each of its departments, such as the health center, computer center, etc., and each of the colleges. It also provides a photo and video library that the user can easily access. The following figure shows the main page of the Zaytoonah University website.



Figure 1: main page

At the top of the site's main page, the logo was placed on the right of the page, and to its left were arranged icons that facilitate access to part of the site's services related to faculty, staff, students, news, and e-mail. All of these elements are placed on a light gray background to create a contrast between them and the background of the site. A green button has also been added in the middle of the page at the top to convert the page to English.

Modern Arabic fonts such as the Ruq'a font and the Naskh font were used in the design of the site, as these fonts are distinguished by the presence of more than one font weight and were used in. Bold font weight was used in headings and standard weight was used in paragraphs. As for the images, the images were used in more than one place within the Al-Zaytoonah University website and in different sizes. For example, on the home page, a group of animated images were used inside a rectangle that changed every few seconds. These images varied between images of the university's presidency and its president, images of the centenary of the Jordanian state, and the latest developments in the Hashemite Kingdom of Jordan. In the university news and announcements section, thumbnail images were used, some of which were live images and others were graphic images that varied between pictures of the university, students, and activities. A group of various pictures were also displayed in a horizontal rectangular bar that the visitor can move to the right or left to view the pictures, which are pictures of the university's facilities in general. As for the color, green was used as a color symbolizing the name and logo of the university, and it is one of the colors that indicates life and prosperity in Arab culture.

### Theoretical Background and Research Model

This research examines the impact of four key elements: color, font, images, and menus. Color and font are directly linked to performance metrics that influence users' perceptions of website design (A. H. Alsswey, Al-Samarraie, El-Qirem, Alzahrani, & Alfarraraj, 2020). Images play a crucial role in enhancing usability and learning, while the menu factor determines how easily

users can navigate options through the user interface (Nielsen & Landauer, 1993). Trust and satisfaction are also essential factors for the success of a website. The proposed research model is illustrated in Figure 1.

## Color

The role of color in design is paramount, as it wields a profound influence on the visual and emotional aspects of any composition. Color choices can evoke specific feelings, set the tone, and convey messages. For instance, Warm colors such as red and orange frequently elicit feelings of energy, passion, and urgency. Conversely, cool colors like blue and green have a tendency to instill a sense of tranquility and serenity. Additionally, color can be used to establish brand identity and recognition, making it a critical element in logo and branding design. It also aids in guiding the viewer's attention, emphasizing key elements, and creating visual hierarchy within a design. The effective use of color can enhance readability, user experience, and overall aesthetic appeal. Whether in graphic design, web design, or any creative endeavor, color is a powerful tool that can enhance and reinforce the intended message, making it an integral component of successful and impactful design. A. Alsswey, Al-Samarraie, and Yousef (2022) define color as a property of light perceived by the human eye as vibrations of different intensities that affect the human body through its level of consciousness. It is a characteristic of the body that can only be perceived by sight, such as whiteness, blackness, redness, etc., which is caused by the light that objects reflect in the eye. It is also defined as “the interaction of shapes and light rays falling on them, thus forming the appearance exterior of these shapes. Therefore, we hypothesized the following:

**H1:** The color of websites a had significant positive influence on students’ satisfaction with the Al-Zaytoonah website.

**H2:** The color of websites a had significant positive influence on students’ Trust with the Al-Zaytoonah website

## Image

Image define as the visual representation of anything, whether human, animal, or inanimate. The image forms a combination of shapes, lines, and colorful movements that represent a visual idea of external facts. This leads to the reader’s emphasis and stimulation of his imagination, emotion, and feeling in a suggestive way. The image is also an easy way to improve the user experience of the Internet site, through which the information that we perceive and transmit to our brains is delivered visually, it attracts attention, stimulates feelings, and attracts him to continue on the site and revisit it (A. Alsswey, Al-Samarraie, & Malak, 2023). Therefore, we expect that:

**H3:** The image of websites a had significant positive influence on students’ satisfaction with the Al-Zaytoonah website.

**H4:** The image of websites a had significant positive influence on students’ Trust with the Al-Zaytoonah website.

## Menus

menus are a fundamental component of website design, providing users with an intuitive means to explore and interact with the content. Their effectiveness greatly influences the user

experience, site organization, and overall success of the website. Menus define as It is a set of options provided to website users to help them find information or perform a function, and is a graphical control that accesses various elements on the graphical user interface. It provides users with built-in options and commands to access site features, functions, or pages(Nguyen, Sidorova, & Torres, 2022). Thus:

**H5:**The menu of websites a had significant positive influence on students satisfaction with the Al-Zaytoonah website.

**H6:**The menu of websites a had significant positive influence on students Trust with the Al-Zaytoonah website.

### Font

The importance of font selection in website design cannot be overstated. Fonts, or typefaces, play a significant role in conveying the website's personality, message, and overall aesthetic fonts are a critical design element in web development. They contribute to a website's identity, impact user experience, and ensure effective communication of information. Choosing the right fonts and using them thoughtfully can greatly enhance the effectiveness and aesthetics of a website. Therefore, we expect that:

**H7:**The Font of websites a had significant positive influence on students satisfaction with the Al-Zaytoonah website.

**H8:**The Font of websites a had significant positive influence on students Trust with the Al-Zaytoonah website.

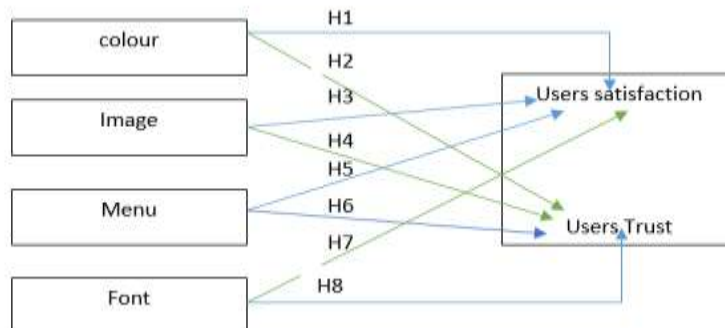


Figure 2: proposed research model

### User satisfaction

Satisfaction is an emotional reaction based on a comprehensive evaluation of the user's experience after using the service, and is not only an analysis of the aesthetic advantages or ease of use, but includes more than that. It means the user's satisfaction and acceptance of the website when he uses the content, interacts with the website's interfaces and browses it without any technical challenges or dissatisfaction with the approved colors, images uploaded on the website and the services provided, as it is a criterion for evaluating the success of the website in terms of design and content, and all that is provided. On the website in general, and reflects the user's

comfort and acceptance of the website in terms of content, colours, services, images and its purpose (Shao, Zhang, Chen, & Zhang, 2020).

### **Trust**

The user's belief that leads to his belief that the website will enable him to meet his needs, as the user experience is the basis that indicates trust, as he believes in ease and simplicity of use, and that the website will meet all his needs(Shin, 2021).

### **Methods**

#### **Sampling**

In this study, students of Al-Zaytoonah University of Jordan enrolled in the second semester of the academic year 2022/2023. This study used a convenience sampling technique by floating. An electronic questionnaire was designed and prepared, and distributed to a sample of (1350) students. All participants provided written informed consent. A grand total of 1215 questionnaires were collected from the identified respondents, accounting for 96.9 percent of the overall responses. The data in this study was numerical in nature and was consequently analyzed utilizing SPSS software.

#### **Data collection and analysis**

This study examined users' satisfaction and trust in the university website using a quantitative approach. The impact of four design elements—images, colors, menus, and font—on students' satisfaction and trust with the university website was specifically examined in this study. A survey was employed to collect information from 1215 individuals. The Pearson correlation coefficients test was employed in this investigation to evaluate the association among the variables under investigation. Furthermore, a multiple linear regression analysis was conducted to confirm the association between the opinions of students regarding the university website. The model was built using the test findings, which also revealed a substantial correlation between the study variables.

#### **Instrument and reliability**

The survey used in this research was adapted from(Chin, Diehl, & Norman, 1988), with modifications made to suit the specific context of the study. Given that all the survey respondents were students, a language expert proficient in English reviewed the questionnaire first, and then it was translated into Arabic by a qualified Arabic-language expert. The survey was structured into two sections. Section 1 primarily focused on gathering demographic information from the participants, such as age, gender, and educational qualifications. Section 2 was tailored to collect responses related to website satisfaction and trust, and it employed a Likert-type scale with five response levels: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly Agree (SA).

To ensure the questionnaire's content validity, a preliminary study was conducted with a sample of 20 students before the official data collection. Based on their feedback, it was confirmed that the questionnaire was clear and comprehensible. Furthermore, the questionnaire's reliability was assessed to determine the consistency of items within each construct, following the guidelines outlined by Drost (2011). In this study, a Cronbach's alpha value of 0.7 or higher was used as the criterion for assessing item reliability. As presented in Table I, all items demonstrated a

Cronbach's alpha value exceeding 0.70, indicating an acceptable level of reliability (van Griethuijsen, 2015).

## Results

### Demographics

The demographic characteristics of the study participants were examined using basic descriptive statistics. The age distribution of the respondents was as follows: 18-22 years (n: 689; 55.2%), 23-27 years (n: 378; 30.2%), 28-32 years (n: 170; 13.6%), and 33 years and above (n: 13; 1.0%). In terms of gender, the majority of participants were male (51.6%), while females accounted for 48.4% of the sample. Regarding education level, the majority of respondents held a bachelor's degree (n: 1221; 97.6%), while a small proportion had a master's degree (n: 27; 2.4%).

### Correlation Analysis

The satisfaction and trust levels were assessed by calculating the correlation coefficients with the design elements. In order to estimate the linear relationship between variables, Pearson's correlation analysis was employed, as it is deemed suitable for this purpose (Ahlgren, Jarneving, & Rousseau, 2003). Table 1 shows the correlation results. The correlation results are presented in Table 1.

**Table 1.** The reliability results

<b>Factor</b>	<b>Items</b>	<b>Cronbach's a</b>
trust	4	<b>.813</b>
Satisfaction	4	<b>.769</b>
color	7	<b>.851</b>
Font	6	<b>.781</b>
menu	6	<b>.764</b>
image	6	<b>.824</b>

**Table 2.** Correlation results

<b>Factor</b>	<b>trust</b>	<b>Satisfaction</b>	<b>color</b>	<b>Font</b>	<b>menu</b>	<b>images</b>
trust	1	.71	.78	.76	.66	<b>.68</b>
Satisfaction		1	.67	.71	.77	<b>.62</b>
color			1	.78	.69	<b>.67</b>
Font				1	.41	<b>.43</b>
menu					1	<b>.32</b>
image						<b>1</b>

Table 2 illustrates the significant correlations among factors such as font, menus, colours, and images. According to the Pearson correlation values, a correlation of 1 to 0.3 indicates a weak correlation, 0.3 to 0.5 represents a moderate correlation, and 0.5 to 1.0 signifies a strong correlation (Field, 2013). Based on the data presented in Table 2, it can be concluded that there is a strong correlation between the colour and users' trust in using the university website ( $r = 0.78^{**}$ ,  $p < 0.01$ ). This is followed by a strong correlation between font ( $r = 0.76^{**}$ ,  $p < 0.01$ ), images ( $r = 0.68^{**}$ ,  $p < 0.01$ ), and menus ( $r = 0.66^{**}$ ,  $p < 0.01$ ) with users' trust. Additionally,

the results also indicate a strong correlation between menus and users' satisfaction ( $r = 0.77^{**}$ ,  $p < 0.01$ ), followed by font ( $r = 0.71^{**}$ ,  $p < 0.01$ ) and images ( $r = 0.62^{**}$ ,  $p < 0.01$ ). Furthermore, there is a strong correlation between colour and font ( $r = 0.78^{**}$ ,  $p < 0.01$ ), as well as between colour and menus ( $r = 0.69^{**}$ ,  $p < 0.01$ ) and images ( $r = 0.67^{**}$ ,  $p < 0.01$ ). However, the relationship between font and menus is moderate ( $r = 0.41^{**}$ ,  $p < 0.01$ ), as is the relationship between font and images ( $r = 0.43^{**}$ ,  $p < 0.01$ ). Finally, the correlation between images and menus is also moderate ( $r = 0.32^{**}$ ,  $p < 0.01$ ).

### Factors affecting users' satisfaction of website

In this study, we employed a stepwise multiple regression approach to identify the factors that impact user satisfaction with a website. Multiple linear regression is a widely utilized method for establishing the connection between two or more variables and a response variable, we verified that each value of the independent variable corresponds to a value of the dependent variable. In order to validate our regression analysis, we checked for multicollinearity, normality, and outliers.

All the data points were found to follow a normal distribution, and no outliers were deemed significant. To examine multicollinearity, we utilized the variance inflation factor (VIF) test as recommended by Kock and Hadaya (2018). VIF values below 3.0 indicate no multicollinearity. Our study revealed VIF values ranging from 1.63 to 2.34 for the variable relationships, well below the 3.0 threshold suggested by Kock and Hadaya (2018). These VIF values are detailed in Table 3. Lastly, we conducted a multiple regression analysis to evaluate the predictive relationship between the dependent and independent variables. The results of the stepwise regression analysis are provided in Table 3.

**Table 3. Multicollinearity VIF statistics**

<b>Factors</b>	<b>Tolerance</b>	<b>VIF</b>
Images	0.51	<b>1.89</b>
Colures	0.59	<b>1.63</b>
font	0.41	<b>2.34</b>
Menus	0.46	<b>2.21</b>

### Discussion

The study's results indicated that various elements such as images, fonts, colors, and menus were significantly related to users' trust and satisfaction when using the university website. Specifically, the study found that color was the primary design element that impacted students' satisfaction with the website. This can be because of the importance of use appropriate colour as backgrounds (Dhou, 2019). These are colors that attract attention and highlight the components of the website, such as titles, paragraphs, lists, and parts for displaying images, and thus direct users' attention to browsing it. Moreover, the finding of this study showed that the colour had an influence on students' trust towards website, this can be because of the colors used in the design of this site inspire comfort and confidence, suggest harmony and balance, and reflect the Arab cultural dimension. The site also uses moderately bright colors where necessary. This result is consistent with the findings of Ćok and Duhovnik (2016) and (Walton, Vukovic', & Marsden, 2002).

his research also discovered that the selection of images on the university website had a significant impact on users' confidence. This could be attributed to the familiarity of Arab users



with symbolic and traditional Islamic images in their daily lives. For example, in the realm of technology, users' heritage and Islamic heritage can be represented through the incorporation of cultural images and symbols. This outcome aligns with the research of A. Alsswey and Al-Samarraie (2021) as well as Hofstede (2001), who have highlighted the importance of reputation, dignity, shame, honor, and pessimism in Arab society. Furthermore, Benaïda (2014) supported this finding in his study on the UI design of Arabic websites, demonstrating that Arab users place greater emphasis on images that resonate with their history and culture.

Furthermore, the outcomes of the research displayed that the selection of font style in website layout garnered a high level of satisfaction and trust from users. This highlights the importance of utilizing local font styles in website design to ensure satisfaction, trust, and success of any technology and product within specific cultural contexts. One possible explanation for this correlation is that Arabic fonts have a significant impact on usability in the Arab world. Many websites use Arabic text that may be challenging to read or comprehend. It is crucial to optimize Arabic fonts on websites to cater to a wide range of Arab users and enhance their understanding of the content. Additionally, careful attention must be paid to Arabic typeface design due to the unique features of the Arabic language, such as overhanging and looping characters, which few typographers have a native understanding of. Google advises against using bold weight in Arabic fonts as it can render glyphs illegible. These findings are further supported by previous studies, such as the one conducted by Miraz, Ali, and Excell (2021), which emphasized the importance of considering the native language of end-users to enhance the usability of an interface.

Also, the results of this study showed the choice of menu type in the design of website also recorded a high score of users' satisfaction a possible reason behind this relationship may be related to the fact that a well-designed menu enhances the user experience by providing clear and intuitive navigation. When menus are structured logically and labels are descriptive, users can easily find the information they seek (Caldwell, Cooper, Reid, & Vanderheiden, 2008). This reduces frustration and the time spent searching for specific content, ultimately leading to higher satisfaction. Users are more likely to achieve their goals on the website when menus are user-friendly. Furthermore, a well-organized menu can improve the overall aesthetic appeal of the website (Lau, 2015). Clean, visually pleasing menus create a positive first impression, setting the tone for the user's interaction with the site. Users are more likely to engage with a website that is visually appealing, which can positively influence their overall perception of the university and its online presence. The relationship between menu design and users' satisfaction on the Zaytoonah university website is evident. A well-thought-out and user-friendly menu structure not only facilitates easier navigation but also enhances the overall aesthetic appeal, accessibility, and performance of the site (Owoyele, 2017). These factors collectively contribute to a positive user experience and increased satisfaction. Therefore, it is essential for Zaytoonah University to invest in the continuous improvement of menu design to ensure that it meets the evolving needs and expectations of its users.

Finally, the result shows, the design of menus on the Zaytoonah University website has a direct and positive impact on users' trust in the site. A well-designed menu communicates professionalism, eases information retrieval, and showcases the university's commitment to accessibility, all of which contribute to a greater level of trust among users (Head, 1999). As trust is a vital component of a successful online presence, Zaytoonah University should prioritize menu design to continue building and maintaining user trust.

## Limitations and Future Works

There are several limitations that should be addressed in future research. First, the sample and data collected in this study were limited to Al-Zaytoonah University students, making it difficult to generalize the results to websites of other universities. Second, the design elements considered in this study were constrained to images, colors, fonts, and menus. Given these limitations, it is recommended that future studies explore the connections between user preferences for specific design attributes (e.g., language, symbols, and icons) from a cultural perspective and their receptiveness to websites. Furthermore, future research could delve into the potential moderating effects of demographic factors, such as age, experience, background, and institution size, on the acceptance of culturally designed websites. Finally, it may be beneficial to categorize Arab users based on specific cultural dimensions, as identified by scholars like Hofstede (2001) and Hall (1976), in order to better understand their cultural profiles in relation to website design.

## Conclusion

The educational website of Al-Zaytoonah University plays an essential role for both students and educators. It serves as a central hub where students can easily access their course materials, lecture notes, and assignments. This accessibility ensures that students can effectively manage their studies, even from remote locations, and offers a wide array of resources crucial for a comprehensive education. This website is a pivotal component of the contemporary educational experience, contributing significantly to the overall quality of education provided by the institution.

This study aimed to explore the impact of design elements such as images, fonts, colors, and menus on user satisfaction and trust. The results indicated that users had a positive inclination towards using a website designed in alignment with their preferences and values. The findings of this research underscore the significant role of design elements in augmenting user satisfaction and trust in the website. Furthermore, it encourages web designers to incorporate relevant cultural aspects when creating educational websites.

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