

The Effect of Graphic Design Elements on Social Media Engagement from Perspective of Design Faculties Students in Jordanian Universities

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Abstract

This study aimed to reveal the effect of graphic design elements participating in social media from the point of view of students of design faculties in Jordanian universities. The analytical descriptive approach was used by developing a questionnaire consisting of (30) items. A random sample was chosen to represent the study population and it included (339) students. The questionnaire was distributed to the study sample and (330) questionnaires valid for statistical analysis were retrieved. After collecting the data, it was analyzed using the (SPSS. 25) program, and the results of the study showed that there was a positive effect of the elements of graphic design on participation in the means of communication in all its dimensions (information-seeking, content trust, and behavior change). Based on the results reached, the study recommends the need to reveal the impact of the use of graphic design in social media on the level of awareness and knowledge of individuals.

Keywords: Graphic Design Elements, Social Media Engagement, information-seeking, content trust, and behavior change, Jordanian Universities.

1. Introduction

In the recent times, rapid development in the information technology (IT) has imparted positive impacts on various areas of life, including the commercial, industrial, and administrative fields. Most importantly, the digitalization of the world is the most vital advancement that has changed the way humans live. An in-depth look at communication and IT demonstrates both change and consistency.

Social networking has an expanding amount of literature and users on social media have gone from being passive content consumers to content creators, emphasizing the necessity of their participation. The social media operates as an information world power, dictating what sort of knowledge is provided to individuals and how they perceive particular topics (Savrum and Miller, 2015).

Social media has grown into an active technical tool and a news and communication medium for people globally. Access to mobile telephone has enabled information sharing as simple as a flick of the finger, especially among digitally informed adolescents. Social communication refers to various user applications and websites to interact and communicate and disseminate information through the internet using computers or mobile phones. It also pertains to any online communication platform that lets users share the content and spread information worldwide (Yepes et al., 2015). In addition, the social media platforms such as Twitter,

Facebook, YouTube and Instagram enable a large number of people from various backgrounds to participate in the creation, modification, sharing, and debate of internet content (Tafesse, 2015).

Merchant and Lurie (2020) recognized that new ways of sharing and disseminating information and news have been publicly available as social media has grown its popularity. They are swift and efficient, and they may spread both simple and misleading statements. To compete in the digital market, one must create marketing materials personalized to his target demography and distribute through proper social media channels. Well-designed content is a cornerstone of a brand's internet presence since as it encourages social media visibility, engagement, and traffic to websites. The participation of good graphic designers in communication is critical for effective visual communication (Abdel-Rahim and Ali, 2016).

Furthermore, they are essential means of communication that allow for the growth and transmission of information to individuals over the internet (Laranjo et al., 2015). It is worth noting that social news networks enable people and groups to share information about any issue or concern, even if they are a minority or are not aware of any other methods of expression.

The world is much more aesthetically oriented when it comes to communication. Graphic designing has become more significant as visual culture surpasses printed or written culture (Estrada and Davis, 2015). Brands attempt to convey themselves visually. Every time a customer interacts with a brand, they are subjected to visual stimuli such as logos, forms, colors, characters, styles, and other elements that help to shape its image.

One of the significant developments made in the 21st century can be associated with the change of methods of communication. Graphic design is the field that relates to the visual communications through which different messages are conveyed to the community within other cultural and social groups to achieve particular goals. Graphic design can be regarded as one of the most vital parts of art. It is an interdisciplinary field of design based upon defining the problems and issues and setting goals for making various decisions. This also includes digital tools to transform them if any correction is required for better interpretation (Ozcan et al., 2021).

Graphic design and social media have a mutually beneficial relationship (Lee et al., 2022). It seeks the users' attention and compels them to use it to gain information regarding contemporary issues. More importantly, graphic designs, and infographics, in particular, enhance users' understanding of the problem and help adopt preventive measures. It affects the users' cognitive comprehension and acceptance of the news (Won, 2019).

Social media has been utilized in various ways in all industries since the dawn of the social media age. Others utilize them as a source of information, while others use them to treat illnesses. The greater the number of social media users for news and psychological support, the more entities use social media to share related information (Andersen et al., 2020). In light of these developments, a pilot empirical study has looked into the impact of social media activity on awareness. However, this research will examine the effects of graphic design elements on social media engagement.

Based on the preceding debate, it is crucial to determine the role of graphic design in social media, especially in light of the current situation where social media plays a significant and

critical part in disseminating information and news about all areas of life, as many individuals follow all that is published on social media.

Therefore, the goal of this study is to clarify the importance of graphic designing in social media and the significant role it plays in influencing the behavior and attitudes of individuals and how it can be used to increase individuals' awareness about a particular phenomenon.

The research is divided into five components. The primary research problem was highlighted in the first section's Introduction section. In the second portion, we developed a theoretical framework that expands on past research on this issue. The investigation's approach was thoroughly explained in the third part. Regarding data analysis and hypothesis testing, recommendations are provided in the fourth section. The fifth and last section provides the results and offers a judgment.

2. Research Objective

The study's objective was to get a deeper understanding of how graphic design elements impact social media engagement from the perspective of design faculty's students in Jordanian universities. The study also looked at the important elements of graphic design in general and in social media in particular, and the level of social media engagement (information seeking, content trust, and behavior change) from the perspective of design faculty's students in Jordanian universities.

3. Study Hypothesis

The current research seeks to test the following hypotheses:

H01: There is no effect of graphic elements on social media engagement from the perspective of design faculty's students in Jordanian universities.

H02: There is no effect of graphic elements on information seeking from the perspective of design faculty's students in Jordanian universities.

H03: There is no effect of graphic elements on content trust from the perspective of design faculty's students in Jordanian universities.

H04: There is no effect of graphic elements on behavior change from the perspective of design faculty's students in Jordanian universities.

4. Literature Review

Social media is one of the most critical and debated topics around the globe in the modern age. It can be described as the interactive technologies and digital channels that help develop and transfer knowledge, ideas, information, and other expressions via virtual or online platforms and related networks (Obar and Wildman, 2015). The influence and presence of social media in today's modern community have become so strong and intense that it profoundly impacts public opinion positively and negatively. In other words, just like any other technology, social media has its pros and cons. In this context, Merchant and Lurie (2020) claimed that, when used correctly, social media can be used to change people's behavior and perceptions positively. Moreover, it can add to the well-being of people in the community.

The influence and benefits of social media have been clearly illustrated in the recent outbreak. Mageto (2019) suggested that social media significantly affected individuals who want to connect online to find information for themselves, their families, or their friends. However, it should be highlighted that improper social media usage might result in unanticipated and unwanted public reactions. For example, Depoux et al. (2020) stated that the broadcast of data from untrustworthy sources on social media has caused panic among tourists, resulting in a significantly larger response than expected. Nevertheless, social media should be employed to support public health reactions through accurate sources extensively.

Researchers have conducted various studies on social media to gauge its impact on individuals. In one such study, Saud and Mashud (2020) looked at the activities mostly done on social media networks and found that social media has a continuous influence on people's habits. Furthermore, because it is extensively used as a source of information among the general public, social media has changed the style and pattern in which people connect (Lim, 2018). Social media allows individuals to contribute more than just facts and expertise and express their feelings and opinions on a given circumstance. Moreover, any online user is given the freedom to interact with the broader public outside. Marshall (2020) even argued that every social media user might play an essential role as an information distributor by becoming a social media activist. This fast change in communication patterns has forced many researchers to acknowledge that social media is one of the major determinants in bringing the extensive change in communication structure. Furthermore, it is one of the primary drivers of shifting from the traditional to the digital era (Ahmed et al., 2017).

Graphic design ignores the textual elements of a design. In this regard, Drake Reitan (2016) argued that graphic design analysis comprises all non-textual materials, not limited to images only. A graphic design plays the role of encoding and interpreting the message in a way that visual depiction presents the message in its entirety (Chu, 2018). It is involved in organizing, analyzing, and giving the visible statement to the target audience and increasing its understanding of the core issue quickly without succumbing to extensive text reading to sufficiently comprehend the subject matter. In other words, graphic designs transform a linguistic message into a graphic representation of the issue.

Since the advent of the digital era, graphic design has gained significant progress. It is because of the more remarkable development of visual arts and multimedia fields (Shi et al., 2017). On social media sites and other online platforms, graphic designs have been an essential source of visual communication. Ambrose et al. (2019) argued that graphic designing is not limited to a specific field of knowledge. Rather, it entails various areas of knowledge focused on the visual communication system in a virtual setup. Since, graphic designing is often used to deliver a message in various campaigns regarding health, politics, social issues, etc., it entails certain fundamental elements that must be considered while creating any campaign.

Van Der Waarde & Vroombout (2012) focused on the three central dimensions of graphic design. First, they suggested that visual elements such as photos, symbols, etc., should be selected. In the second step, the designer should develop visual strategies to increase the dissemination of the message through graphic design. The designer should ensure that the brand or identity of the message is identifiable. In today's digitalized world, online campaigns are increasing. They demand interaction designs that significantly focus on visual and

behavioral dimensions to increase user engagement, especially social media platforms. Thirdly, the designer should be aware of the target audience and their needs. Thus, visual communication should be aligned with their requirements and needs.

5. Research methodology

Quantitative research, sometimes referred to as number crunching, is the in-depth analysis of social phenomena using quantitative techniques. The creation and use of numerical models, the creation of hypotheses, and the study of miracles are all examples of quantitative research aspects. Because it creates a strong connection between actual observation and the mathematical formulation of quantitative connections, the estimate approach is essential to quantitative research (Sekaran, 2010).

Due to the analytical descriptive approach's suitability for the current study's nature, this study also developed a questionnaire as the primary instrument for gathering data from the study sample. The theoretical literature pertinent to the current study's subject was also reviewed in books or scientific periodicals.

5.1 Research Respondents

According to the data of the Jordanian Ministry of Higher Education, there are (2100) students enrolled in the faculties of graphic design in Jordanian universities for the year 2023, where these students are distributed among 14 public and private universities.

5.2 Sample of the Research

The study sample was selected based on Krejcie and Morgan (1970) sample determination table, according to that the size of the study sample is (322), and according to Leveugle (2009) to ensure a 95% confidence level the study sample was (339) participants.

The study's participants were chosen at random, and the researcher handed 339 questionnaires to participants. For statistical analysis, a total of 330 valid surveys were recovered which represent 97.3% of all distributed surveys.

Table 1. The research sample distribution according to their demographic factors

| Factor | Categories | Frequency | Percentage |
|-------------|-------------|-----------|------------|
| Study Level | First year | 114 | 33.6% |
| | Second year | 101 | 29.8% |
| | Third year | 90 | 26.6% |
| | Fourth year | 34 | 10.0% |
| Gender | Male | 163 | 48.1% |
| | Female | 176 | 51.9% |

5.3 Study Instrument

The researcher in the current study relied on the questionnaire as a main tool for collecting data. The questionnaire includes a set of different questions that are related to each other in a manner that achieves the objective that the researcher seeks through the problem posed by her research. The number of questions in the questionnaire should be sufficient and appropriate to achieve the research objectives.

Also, questionnaire is a search tool, consisting of a set of questions and other information requests in order to collect information from the persons in question, and the questionnaires from the rest of the search tools are low cost and do not require much effort, the questionnaire often has standard answers that make it easy to collect and organize data.

A questionnaire with five options from strongly agree to strongly disagree to a relative weight (5-1) was used in this investigation. The questionnaire was divided into the following sections:

The first section is focused with the respondents' personal information (study level and gender).

The second section addresses the independent variable (graphic design elements).

Third Section: This section is concerned with the dependent variable (social media engagement).

5.4 Statistical Techniques

For the analysis of the study, data will be analyzed with Statistical Package for the Social Sciences software (SPSS. 25), through:

1. The descriptive statistics (frequency, percentage, arithmetic mean and standard deviation).
2. Multiple Regression Analysis to test the validity of the study model, and the effect of the independent variable on the dependent variable.
3. The Variance Inflation Factory (VIF) test and the Tolerance test to ensure that there is no high multicollinearity between the independent variables.
4. Skewness test to ensure that the data follow a normal distribution.
5. Cronbach's alpha to verify the stability of the study tools.

6. Findings and Discussion

This section shows the results of the data analysis process and the discussion of these results according to the study hypotheses and previous studies.

6.1 Descriptive Analysis

A descriptive assessment of the construct being investigated in the current study is provided in this section. The graphic design elements and social media engagement listed below were used to generate the lowest, maximum, mean, and standard deviation scores for the 30 items in this study.

Table 2. Descriptive Analysis the Study Variables

| No. | Variables | Min | Max | Mean | SD |
|-----|-------------------------|------|------|--------|--------|
| 1 | Graphic Design Elements | 1.00 | 5.00 | 3.7068 | .72335 |
| 2 | Information Seeking | 1.00 | 5.00 | 3.6721 | .55744 |
| 3 | Content Trust | 1.00 | 5.00 | 3.5639 | .71348 |
| | Behavior Change | 1.00 | 5.00 | 3.5116 | .78125 |
| | Social Media Engagement | 1.00 | 5.00 | 3.5825 | .58357 |

Table 2 shows that, graphic design elements variable achieved mean (3.70) and standard deviation (.723), the dependent variable (social media engagement) achieved mean (3.58) and standard deviation (.583), while at dimensions level, information seeking came at first rank with mean (3.67) and standard deviation (.557), the content trust dimension came at second rank with a mean (3.56) and standard deviation (.713), while at the last rank the behavior change dimension came with a mean (3.51) and standard deviation (.781).

6.2 Hypothesis Testing

Before starting the application of regression analysis to test the hypotheses of the study, some tests were performed, in order to ensure that the data fit the assumptions of the regression analysis, as it was confirmed that there was no high correlation between the independent variables (Multicollinearity) using the Variance Inflation Factory (VIF) test, and the test of tolerance (Tolerance) for each of the variables of the study, taking into consideration that the variance inflation factor (VIF) did not exceed the value (10) and the value of the Tolerance test was greater than (0.05), and it was also made sure that the data followed the normal distribution by calculating the skewness coefficient, bearing in mind that the data follow a normal distribution if the skewness coefficient is close to (0). Table (3) shows the results of these tests.

Table 3. Results of VIF, Tolerance, and Skewness Tests

| Variables | VIF | Tolerance | Skewness |
|-------------------------|-------|-----------|----------|
| Graphic design elements | 2.017 | .496 | .921 |

The data in the table (3) showed that, the value of VIF for graphic design elements less than (10) and achieved (2.017), and the tolerance value was (.496) and greater than (0.05), this is an indication that there is no high correlation between the independent variables. It was confirmed that the data follow the normal distribution by calculating the Skewness coefficient, where the values were close to the value (0) means less than (1), so it can be said that there is no real problem related to the normal distribution of the study data. Accordingly, we can test the hypotheses of the study as follows:

H01: There is no effect of graphic elements on social media engagement from the perspective of design faculty's students in Jordanian universities.

Table 4. Model summary of the impact of graphic design elements on social media engagement

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .764 | .584 | .583 | .37684 |

Table (4) shows that the value of the correlation coefficient for the independent variable (graphic design elements) and the dependent variable (social media engagement) combined amounted to (0.764), and the value of the coefficient of determination was (R²) (0.584), meaning that the model explained (58.4%) of the total variance in (social media engagement), while the rest is explained by other factors.

Table 5. Results of multiple regression analysis of the effect of graphic design elements on social media engagement ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|---------|------|
| Regression | 67.251 | 1 | 67.251 | 473.571 | .000 |
| Residual | 47.857 | 337 | .142 | | |
| Total | 115.107 | 338 | | | |

Table (5) shows that the value of F amounted to (473.571), and that the level of statistical significance reached (0.00), meaning that it is less than (0.05), and thus the null hypothesis was rejected and the alternative hypothesis was accepted, which is that there is positive statistical significance impact at ($\alpha \leq 0.05$) of graphic design elements on social media engagement with its dimensions (information seeking, content trust, behavior change) from the perspective of design faculty's students in Jordanian universities.

Tale 6. Results of multiple regression analysis to test the effect of the independent variable on dependent variable

| Variables | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | 1.297 | .107 | | 12.118 | .000 |
| Graphic design elements | .617 | .028 | .764 | 21.762 | .000 |

The statistical results presented in table (6) indicated that the significant value was (0.000), that is, the null hypothesis of the graphic design elements will be rejected, and that means there is a positive impact of graphic design elements on social media engagement. The table shows that the graphic design elements influential in the social media engagement with a value of Beta (0.617).

H02: There is no effect of graphic elements on information seeking from the perspective of design faculty's students in Jordanian universities.

Table 7. Model summary of the impact of graphic design elements on information seeking

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .449 | .201 | .199 | .49894 |

Table (7) shows that the value of the correlation coefficient for the independent variable (graphic design elements) and the dependent variable (information seeking) combined amounted to (0.449), and the value of the coefficient of determination was (R^2) (0.201), meaning that the model explained (20.1%) of the total variance in (information seeking), while the rest is explained by other factors.

Table 8. Results of multiple regression analysis of the effect of graphic design elements on information seeking ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|------|
| Regression | 21.136 | 1 | 21.136 | 84.904 | .000 |
| Residual | 83.894 | 337 | .249 | | |
| Total | 105.031 | 338 | | | |

Table (8) shows that the value of F amounted to (84.904), and that the level of statistical significance reached (0.00), meaning that it is less than (0.05), and thus the null hypothesis was rejected and the alternative hypothesis was accepted, which is that there is positive statistical significance impact at ($\alpha \leq 0.05$) of graphic design elements on information seeking from the perspective of design faculty's students in Jordanian universities.

Tale 9. Results of multiple regression analysis to test the effect of the independent variable on dependent variable

| Variables | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | 2.391 | .142 | | 16.873 | .000 |
| Graphic design elements | .346 | .038 | .449 | 9.214 | .000 |

The statistical results presented in table (9) indicated that the significant value was (0.000), that is, the null hypothesis of the graphic design elements will be rejected, and that means there is a positive impact of graphic design elements on information seeking. The table shows that the graphic design elements influential in the social media engagement with a value of Beta (0.346).

H03: There is no effect of graphic elements on content trust from the perspective of design faculty's students in Jordanian universities.

Table 10. Model summary of the impact of graphic design elements on content trust

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .720 | .518 | .517 | .49606 |

Table (10) shows that the value of the correlation coefficient for the independent variable (graphic design elements) and the dependent variable (content trust) combined amounted to (0.720), and the value of the coefficient of determination was (R²) (0.518), meaning that the model explained (51.8%) of the total variance in (content trust), while the rest is explained by other factors.

Table 11. Results of multiple regression analysis of the effect of graphic design elements on content trust ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|---------|------|
| Regression | 89.133 | 1 | 89.133 | 362.221 | .000 |
| Residual | 82.927 | 337 | .246 | | |
| Total | 172.060 | 338 | | | |

Table (11) shows that the value of F amounted to (362.221), and that the level of statistical significance reached (0.00), meaning that it is less than (0.05), and thus the null hypothesis was rejected and the alternative hypothesis was accepted, which is that there is positive statistical significance impact at ($\alpha \leq 0.05$) of graphic design elements on content trust from the perspective of design faculty's students in Jordanian universities.

Table 12. Results of multiple regression analysis to test the effect of the independent variable on dependent variable

| Variables | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | .932 | .141 | | 6.619 | .000 |
| Graphic design elements | .710 | .037 | .720 | 19.032 | .000 |

The statistical results presented in table (12) indicated that the significant value was (0.000), that is, the null hypothesis of the graphic design elements will be rejected, and that means there is a positive impact of graphic design elements on content trust. The table shows that the graphic design elements influential in the social media engagement with a value of Beta (0.710).

H04: There is no effect of graphic elements on behavior change from the perspective of design faculty's students in Jordanian universities.

Table 13. Model summary of the impact of graphic design elements on behavior change

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .735 | .541 | .540 | .53013 |

Table (13) shows that the value of the correlation coefficient for the independent variable (graphic design elements) and the dependent variable (behavior change) combined amounted to (0.735), and the value of the coefficient of determination was (R²) (0.541), meaning that the model explained (54.1%) of the total variance in (behavior change), while the rest is explained by other factors.

Table 14. Results of multiple regression analysis of the effect of graphic design elements on behavior change ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|---------|------|
| Regression | 111.588 | 1 | 111.588 | 397.060 | .000 |
| Residual | 94.709 | 337 | .281 | | |
| Total | 206.296 | 338 | | | |

Table (14) shows that the value of F amounted to (397.060), and that the level of statistical significance reached (0.00), meaning that it is less than (0.05), and thus the null hypothesis was rejected and the alternative hypothesis was accepted, which is that there is positive statistical significance impact at ($\alpha \leq 0.05$) of graphic design elements on behavior change from the perspective of design faculty's students in Jordanian universities.

Table 15. Results of multiple regression analysis to test the effect of the independent variable on dependent variable

| Variables | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | .567 | .151 | | 3.768 | .000 |
| Graphic design elements | .794 | .040 | .735 | 19.926 | .000 |

The statistical results presented in table (15) indicated that the significant value was (0.000), that is, the null hypothesis of the graphic design elements will be rejected, and that means there is a positive impact of graphic design elements on behavior change. The table shows that the graphic design elements influential in the social media engagement with a value of Beta (0.794).

6. Conclusion

Social media has been seen as a potent tool for fostering connections between content creators and audiences. In other words, there is a stronger connection between graphic designers and social media. It is important to note that regular people are increasingly contributing to the creation of visual material for social media. Since visual sources of information are more likely to capture people's attention, graphic design's influence on social media is growing.

For all of the most recent news and information, social media was thought to be the finest source. Info graphics contributed to the user's capacity to understand the news and information by giving them the chance to seek news and information about any subject or topic. Additionally, it boosted user acceptability of communication since, in contrast to print media; people find it difficult to absorb specifics and information.

Info graphics improve user comprehension and knowledge of the news as a result. The visual depiction improves users' cognitive processing and aids in their grasp of the nature of the current issue. Social media has significantly boosted the use of graphic design. Designing, modifying, and sharing online material has helped many individuals connect with one another across all origins and cultures.

In this research, the effect of using graphic design elements on social media engagement was examined from the perspective of students of graphic design faculties in Jordanian universities. The descriptive analytical approach was used through the development of a questionnaire distributed to the study sample, which included (330) students. The results of the study showed that there is a positive effect of the elements of graphic design on social media engagement in all its dimensions.

Based on the results reached, the study recommends the necessity of revealing the important graphic design elements necessary for designing social networking pages, with the aim of revealing the strengths and weaknesses of all elements of graphic design. In addition to a need to study the reality of participation in social media and its impact on the level of awareness and knowledge of individuals in general and about health and economic crises in particular, as there is a noticeable tendency by individuals towards receiving information mainly from social media.

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