

# Comparing the Influence of Non-Persuasive and Persuasive Visual on a Website and Their Impact on Users Behavioural Intention

Nurulhuda Ibrahim<sup>1</sup>, Mohd Fairuz Shiratuddin<sup>2</sup>, Kok Wai Wong<sup>2</sup>

<sup>1</sup>*School of Multimedia Technology and Communication (SMMTC), UUM College of Arts and Sciences, Universiti Utara Malaysia, 06010 UUM Sintok, Kedah Darul Aman, Malaysia.*

<sup>1,2</sup>*School of Engineering and Information Technology, Murdoch University, 90 South St, Murdoch WA 6150, Australia. nurulhuda@uum.edu.my*

**Abstract**—Research related to first impression formation has highlighted the importance of visual appeal in influencing favourable attitude towards a website. It is proposed that users are actually drawn to specific characteristics or aspects of visual design of a website, and tend to disregard other features. Therefore, this study aims to investigate which visual design strongly appeals to the users by comparing the impact of common visuals with persuasive visuals. The principles of social influence are proposed as added value to the persuasiveness of the web visuals. An experimental study is conducted and the PLS-SEM method is employed to analyse the obtained data. The result of the exploratory and confirmatory analyses demonstrated that the structural model displays better quality when tested with persuasive data sample compared to non-persuasive data sample. Thus, it is concluded that persuasive visual helps to better explain the relationship between users' attitude and intention. This means that exposure to persuasive visuals brings about consistent favourable perception to the web design.

**Index Terms**—Persuasive Visual; Web Design; Users' Attitude; PLS-SEM.

## I. INTRODUCTION

Online information web services boost rapidly with the growth of the Internet. More extensive information can now be obtained online, easing some of complex problems plaguing the processes of retrieving information. A wide range of services, ranging from government to private agencies, businesses or public welfares, sports or entertainment; all in various possible ways (e.g. websites, mobile apps, video streaming, online broadcasting, social media etc.) are reachable by a mouse click. These Internet facilities enable users to be in control of the online world. Users can decide on their choice of whereabouts, either to stay in one place or to leave, as well as to remember or disregard certain web services or applications.

In the field of human-computer communication (HCC), communication relies heavily on two factors. First, it depends on how well web designers deliver or design the visual property of a web. Second, it relies on the users' visual information processing ability to recognise, interpret and recall the web content [1]. If a user fails to recognise the information upon his or her arrival at a website, he or she might instantly perceive the website as unfavourable to his or her desires, and

subsequently leaves the website without the idea of returning. The user could resort to such a detrimental decision because of the impulsive behaviour that is tied with the first impression of a website [2]. Therefore, designers are advised to design the web content persuasively to simplify the role of users [3].

However, the recipe of a persuasive website design that both appeals to the users and influences them to remain at the website is still unclear. Moreover, the trends in technology and web design are also expanding and consequently, users' expectations are also increasing. Researchers in [4] and [5] investigated the impact of several persuasive visuals that are commonly used in e-commerce websites toward users' perceived emotion, perceived credibility, and perceived logic. A considerable amount of literature highlighted that the influences of each visual properties may vary according to different products, user characteristics, or different stages in the users' decision cycle. Much of the available literature on visual properties also concluded that visual persuasion that appeals to website's credibility and logic is more important than being appealing to users' emotion.

The aim of this paper is to quantitatively examine the effect of persuasive visual, by comparing the impact of non-persuasive visual and persuasive visual on the website towards users' motivation and behavioural intention. This study will help to answer the question of 'which', that is "to identify which type of visual that favourably affects the users' attitude and behavioural intention". The study employs six principles of social influence as defined by Cialdini [6] to enhance the persuasiveness of web visuals. Even though the principles are initially used in the context of human-to-human communication, some studies also suggest that the principles of reciprocity, commitment, social proof, authority, liking, and scarcity are also relevant in the context of HCC [2], [7]–[10]. Moreover, the social influence principles by Cialdini are very popular and widely used for products' marketing and advertisement. Potential visuals that represent each principle in the online context have been previously discussed [11]–[14]. Notably, non-persuasive visuals are represented by other visuals that are unrelated to the principles of social influence.

## II. FACTORS AFFECTING THE PERSUASIVENESS OF WEB VISUALS

In this study, persuasive visuals are conveyed in the form of pictorial and short textual messages. It is believed that the impact of persuasive visual is ambiguous from the viewpoint of HCC, in which the information is communicated to the viewers in the form of visual elements within the website. The aim of the study is to examine the relationship between users' perception of web design characteristics, and the intentional behaviour resulting from their prior experience with persuasive visual design. For this purpose, a model of first impression formation for tourism destination websites by Kim and Fesenmaier [2] is extended. Prior to the extension, Kim and Fesenmaier had conducted an empirical study to investigate the key design factors in the formation of impressions towards web interfaces. Their model provides practical guidelines for evaluating the persuasiveness of a website. Furthermore, one of the social influence principles was readily included in the model, even though no significant association related to reciprocity was derived at the end of the study. Yet, the treatments for their experiments were constructed using screenshots of 50 official state tourism websites in the United States, which they converted into a short animated clip. Due to this, they admitted that the survey system developed for their study did not provide an identical environment to the web. Among limitations observed are inability to perform examinations on the use of particular design components or the effective use of message cues, as well as failure to control predetermined images in the study. As such, this study would like to address these limitations by conducting another experiment that is identical to web environment. It is foreseen that social influence principles in the form of persuasive visuals are among factors that predict users' belief, attitude and intention towards a website.

In the original model, informativeness, usability, credibility, aesthetic, engagement, and reciprocity (reciprocity is one of the social influence principles) are proposed as factors that complement the persuasiveness of a website. Thus, in this study, an extension is made to include another five principles of social influence by Cialdini [6] into the original model, thus implying that the added value of social influence principles will enhance the persuasiveness of a website. It is hypothesised that the more persuasive a website is perceived to be, the more likely users to form a favourable impression toward the website, which will consequently affect their level of satisfaction. As a result, favourable users' behavioural intention can be expected. Figure 1(a) shows the conceptual model of this study. This study believes that the extended model is sufficient to evaluate the influence of visual persuasion towards online users' belief, attitude, and behavioural intention.

In the conceptual model, elements of informativeness, usability, credibility, visual aesthetic, engagement, and social influence represent the predictors, whereas satisfaction and behavioural intention represent the observed variables. It is predicted that perceived satisfaction acts as a mediator in the relationship between predictors and behavioural intention. However, in order to achieve the objective of this paper (i.e. to compare the impact between non-persuasive visual and persuasive visual of the website towards users' belief, attitude,

and behavioural intention), the social influence factor is excluded from the SEM model (see Figure 1(b)). The exclusion is necessary since the specified persuasive visuals are not presented at the control website; therefore the impacts of the social influence constructs are not comparable.

## III. RESEARCH DESIGN

The comparison between non-persuasive and persuasive visuals in this study is carried out specifically in the area of online tourism website. In this study, two web samples with each having five pages are developed, one being the control and the treatment web samples, respectively. These web samples are identical and share the same colour, navigation, layout and themes to ensure that there are only small differences between them, and that will be on the persuasive and non-persuasive visuals only. The initial design used for the website is auto-generated using software called Artisteer version 4.0. From there, the website is customised to fit the content and aim of this study. Prior to the actual experiment, both websites were tested using various web browsers and computing platforms to ensure accessibility and compatibility requirements are met. In addition, liquid layout was scripted using cascading style sheet (CSS) so that the website could also be viewed using smaller screened devices, such as tablets and smart phones. Figure 2 shows sample screenshots from both websites; on a desktop computer and a smart phone with a 5.5 inch screen size. For data collection, a quantitative approach is employed by conducting an online survey. The instruments used in this study have been examined and approved by the Murdoch University Human Research Ethics Committee (approval #2013/155).

The procedures for the experiments are adopted from Tang (2009), who conducted a PhD study that combines the Elaboration Likelihood Model (ELM) and the dual-mediation model of advertising persuasion to understand the dual route information processing when people browse tourism websites. For this purpose, Tang's study employed web-based survey where each participant was asked to browse one of five available websites and was given total freedom to surf the website anyhow he or she likes. This study, however, is grounded by different theories from the one explored in Tang's dissertation since Tang's work was discussed from the advertising perspective.

In this study, convenient sampling is employed, with participants aged from 18 and above recruited via Facebook. The decision is made due to the reason that it is now common for travellers to look for tourism information and share their trip experiences through social media, especially on Facebook (see Figure 3). It is assumed that the participants are mature enough to make their own travel decisions. They are also encouraged to invite their Facebook friends to participate in the study. Thus, the survey is non-representative, and relies heavily on volunteers who discover the study from Facebook's News Feed. Users' perception was recorded based on their short and quick first impression of the visual design, which took less than two minutes (data was collected by and gathered from Google Analytic).

Once the data is cleaned from missing values and outliers, an Exploratory Factor Analysis (EFA) is carried out to measure the scales' validity and reliability. The analysis is vital as the

instruments are being reused from various resources and applications; in this regard the instruments only assessed the visual design of a website instead of assessing the usability of the entire website. The conceptual model is then amended according to the results obtained from the EFA analysis, resulting to a combination of the visual aesthetic and engagement idea into a construct, labelled as visual engagement [13].

Sample characteristics chosen in this study include gender, age range, level of education, employment status; duration of time spent online, Internet skills, and travelling frequencies. The sample, in general, has fairly equal proportion of both genders. Majority of respondents in this study aged between 18 to 39 years old, holding either a bachelor or professional degree, employed or still studying, as well as those who spend more than three hours a day on the Internet, possess moderate Internet skills, and travel at least once a year.

Data obtained from Google Analytics shows that majority of the respondents reside in Malaysia and more than 30% are using mobile devices to access the website. As the number of page views was greater than the number of sessions recorded, it is speculated that the respondents did flip around another web pages while browsing the website. On average, the respondents in the control group spent longer time browsing the website and

viewing more web pages compared to the treatment group. The latter were recorded spending longer time at each visited page.

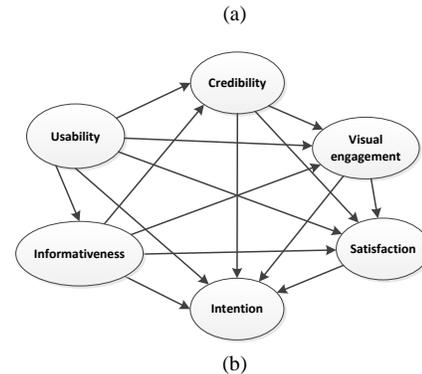
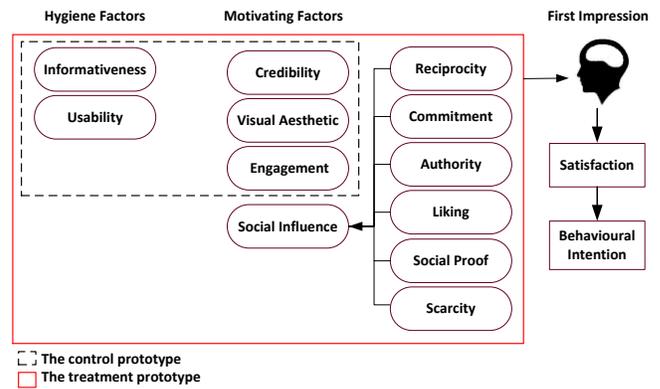


Figure 1(a): The conceptual model of the persuasive visual design for web design & Figure 1(b): Basic SEM model.

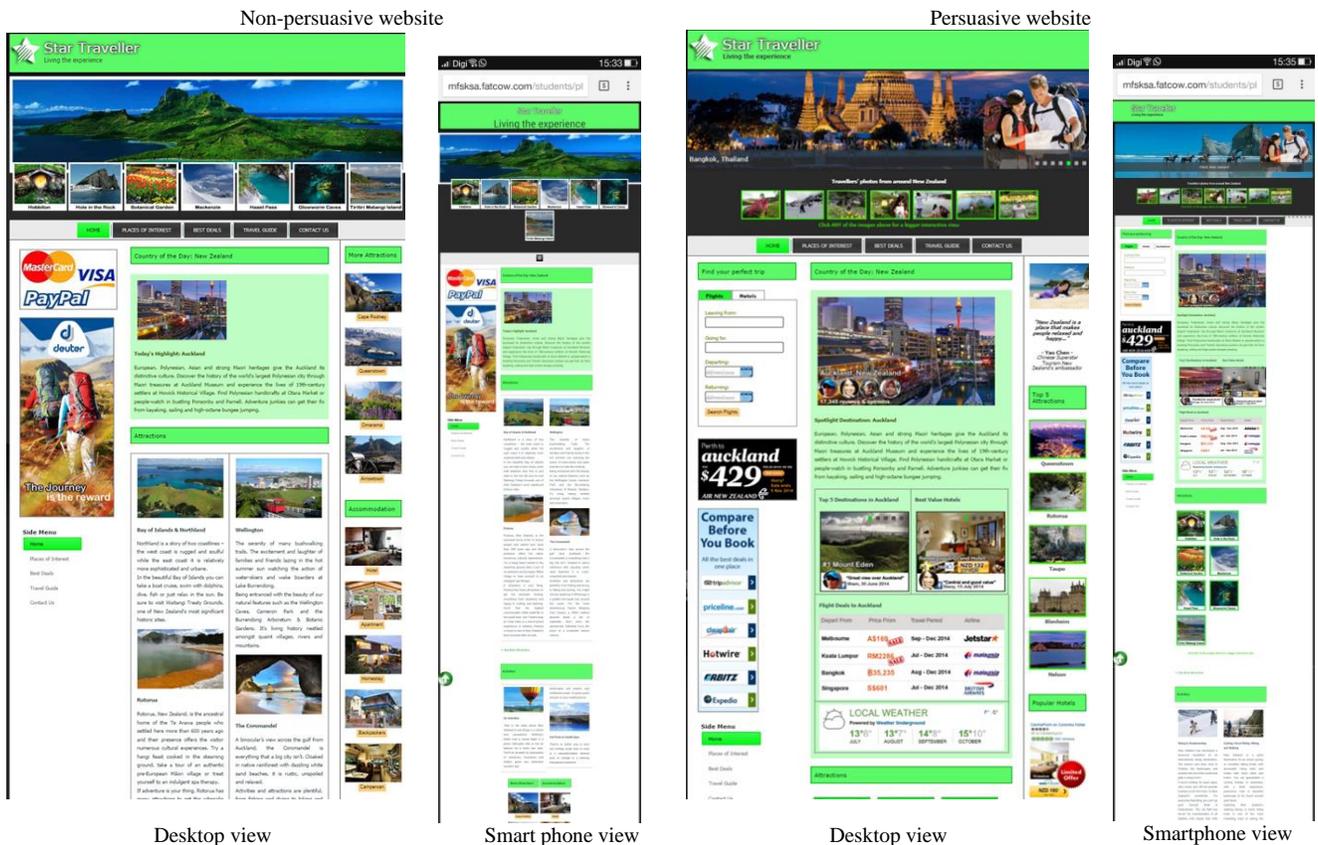


Figure 2: Various screenshots from the two websites.



Figure 3: The role of Social Media in the tourism industry [21], downloaded from the Tourism Australia website.

Exploratory analysis and confirmatory analysis are completed by using the second-generation technique of data analysis, known as the Partial Least Squares Structural Equation Modelling (PLS-SEM). PLS-SEM is used due to the following justifications:

- This is an explorative study as it is extending the model by Kim and Fesenmaier (2008). PLS-SEM is preferable when the study is exploratory or an extension of an existing structural theory [18].
- Data obtained from the study did not meet the requirement of normal distribution and the sample size is small. PLS-SEM does not require multivariate normality and large sample sizes [19].
- Construct with few items are used in the study [18].
- PLS is particularly well-suited on defining the behavioural intention models in an applied setting [20].

In this paper, behavioural intention is measured using four items; intention to use, intention to purchase, intention to recommend, and one item to measure the attitude towards the destination. In order to achieve the objective of the paper, the basic SEM model (see Fig. 1(b)) is tested using two data sets, namely data obtained from the control group (no persuasive visual), and data obtained from the treatment group (with persuasive visual). The goals of conducting the PLS-SEM exploratory analysis are to explore the significant associations between latent variables to better understand the nature of the variables, so a theory-supported model can be built [21], and to select the model with better quality for further assessment in the next research phase.

At this stage, there are 181 rows/responses that represent the persuasive group, whereas only 109 rows/responses represent the non persuasive group. This resulted to imbalanced data sets, considering the results of persuasive group accounts to majority of the data, which is 62.4%, while non-persuasive group accounts for only 37.6%. It is highlighted in Rosnow, Rosenthal, & Rubin (2000) that unequal sample size brings about a situation where "the effect size formula will tend to underestimate the actual effect size". "Insufficient power to obtain a p-value at some predetermined level of significance" may occur with unequal sample sizes [23]. Researchers also discovered that equivalence testing performs best when sample sizes are equal [24]. Therefore, equal sample size is used to compare the effect of persuasive and non-persuasive visuals on the users' attitude and behavioural intention to avoid the aforementioned issues. As a result of this, a systematic randomisation technique is utilised to obtain 109 responses from the persuasive group sample. A random value column is

transformed using the RAND () function in Microsoft Excel. The random column is sorted and the selection is expanded to the affected columns, resulting in a random order of persuasive rows/responses from which the top 109 responses are selected for the SEM analysis. Notably, PLS-SEM minimum sample size should be ten times of the largest number of the structural paths directed at a particular latent construct in the structural model [18]. Hence, the assessment of the basic SEM model requires at least 50 responses for each group, as the maximum structural paths directed at a latent construct in the basic SEM model are recorded at 'five'. Since 109 are well above 50, it is concluded that the sample size used for the study is satisfactory.

#### IV. RESULTS AND DISCUSSION

In a situation where it is deemed necessary to opt for a more comprehensive model, model fit indices should be referred to. Kock (2015) recommends three main criteria during a model assessment, namely 1) significant p values at 0.05 level for the average path coefficient (APC), 2) average block variance inflation factor (AVIF) must be lower than 5, and 3) significant p values at 0.05 level for average R-squared (ARS); respectively and in the order of importance. Referring to Table 1, it is noted that the model with persuasive data sample are of better quality than the one tested with non-persuasive data sample, which can be observed through the improved APS, and ARS indexes.

Further investigations are carried out on the structural models by assessing the coefficient of determination (R-squared) and path coefficients. R-squared is a statistical measure that indicates how close the data are to the fitted regression line, where 100% of R-squared value indicates that the model explains all the variability of the response data around its mean. The value of R-squared at 0.75, 0.50, or 0.25 are considered as substantial, moderate, or weak, respectively [18]. As shown in Table 1, the R-squared values for the non persuasive group are all below 0.50; hence the respective variables are explained by less than 50% by the structural paths that are directed to them. Meanwhile the R-squared value for the persuasive group ranges from 34.0% to 66.3%, showing a better variability of the response data.

Concurrently, path coefficients are assessed to estimate the magnitude and significance of the hypothesised causal connections between the sets of variables. The measure determines the strength of the association between the predictor variable and the dependent construct. The path coefficients should be supported with the recommended effect size (ES) of

0.02, 0.15, or 0.35; representing small, medium or large effects, respectively. Any path coefficient with ES that is below 0.02 is regarded as irrelevant, even if the corresponding p values are significant [25].

The exploratory analysis (see Table 1) shows that the persuasive group sample has more significant associations compared to the non-persuasive sample. The persuasive sample also exhibits stronger path coefficients, evident with stronger effect sizes. Notably, both samples have equal numbers of significant associations between the predictors and perceived satisfaction, which is proposed as a mediator between respective predictors and behavioural intention in the basic model (see Figure 1(a)). It is also noted that the strength of the associations between the predictor variables and perceived satisfaction are slightly stronger in the non-persuasive model, yet perceived satisfaction insignificantly associated to perceived behavioural intention. As such, perceived satisfaction does not moderate the relationship between predictors and behavioural intention in the basic SEM model with the non-persuasive data sample. Conversely, perceived

satisfaction may moderate the relationship between the respective predictors and behavioural intention in the basic SEM model with the persuasive data sample. It is inferred that the difference between the visuals for non-persuasive website and persuasive website leads to different impacts on users' perceived satisfaction. Moreover, the non-persuasive website may appear simpler in terms of its visual design compared to the persuasive website that is equipped with additional visuals that are meant for emphasising the social influence principles. This could very well explain the reason why the association between usability and visual engagement is significant with the non-persuasive sample whereas the same association appears insignificant with the persuasive sample. Furthermore, past studies suggest that not all social influence principles are effective online and applicable across all domains. Yet, perceived website credibility is improved with the treatment of persuasive visuals. It is suggested that further explorations should be carried out to understand on how the web users interpret different type of visual messages in specific domains.

Table 1  
Exploring the constructs' relative to the basic SEM model

	Non-Persuasive Data (N=109)		Persuasive Data (N=109)	
Average path coefficient (APC)	0.214, P=0.005		0.268, P<0.001	
Average block VIF (AVIF)	1.317		1.984	
Average R-squared (ARS)	0.264, P<0.001		0.514, P<0.001	
<b>Latent variables coefficients: R-squared (R<sup>2</sup>)</b>				
Informativeness	weak		0.434	
Usability	n.a.		n.a.	
Visual Engagement	0.346		0.642	
Credibility	weak		0.340	
Satisfaction	0.429		0.490	
Intention	weak		0.663	
<b>Path coefficients</b>				
Associations	$\beta$	ES	$\beta$	ES
Usability → Informativeness	0.451	0.204	0.659	0.434
Informativeness → Credib	0.308	0.105	0.441	0.249
Usability → Credib	n.s.		0.190	0.091
Informativeness → VisEng	0.247	0.115	0.360	0.257
Usability → VisEng	0.225	0.096	n.s.	
Credib → VisEng	0.284	0.135	0.420	0.297
Informativeness → Satisfy	0.296	0.113	0.198	0.117
Usability → Satisfy	0.376	0.181	0.306	0.181
VisEng → Satisfy	0.281	0.133	0.248	0.149
Credib → Satisfy	n.s.		n.s.	
Informativeness → Intention	n.s.		n.s.	
Usability → Intent	n.s.		n.s.	
VisEng → Intent	0.393	0.190	0.384	0.290
Credib → Intent	n.s.		0.209	0.139
Satisfy → Intent	n.s.		0.272	0.183

\*\* weak: R<sup>2</sup><0.25, n.a.: not applicable, n.s.: not significant

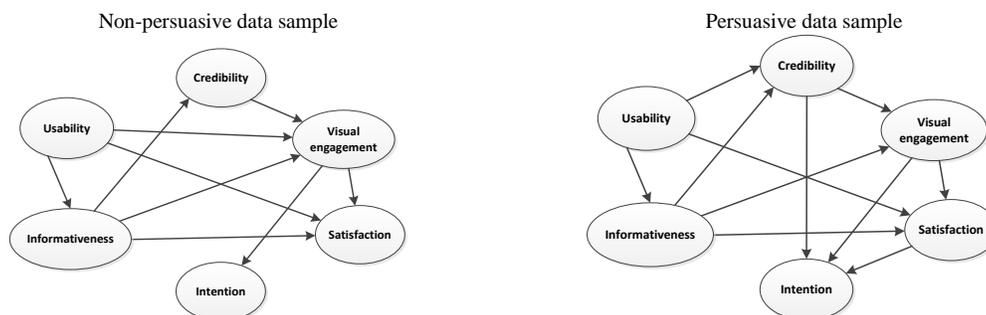


Figure 4: Theory-supported models

It is important to note that with the persuasive sample, as perceived credibility, satisfaction, and visual engagement increase, there will be a significant increase too on perceived behavioural intention, with effect size ranged from 0.139-0.290. On the other hand, with the non-persuasive sample, only visual engagement will significantly impact the perceived behavioural intention, while other predictors appear to be insignificant. However, the results also show signs of indirect effects between variables. For instance, credibility factor is shown to have an indirect impact towards perceived satisfaction. Similarly, perceived informativeness and usability also indirectly affect intention, suggesting that visual communication is not a straightforward effect and that there will likely be moderating or mediating effects along the process.

The results of the exploratory analysis help uncover the true nature and magnitude of each association among the variables in the non-persuasive and persuasive data samples. Following the approach used in [21], the basic SEM model for each data sample is revised by removing all insignificant associations from the model and to come out with a theory-supported model that best fits the data. The revised model highlights the difference in the associations between the predictors and the observed variables (i.e. Perceived satisfaction and behavioural intention) as depicted in Figure 4. Then, the confirmatory analysis employing the same settings as in the exploratory analysis is conducted. As expected, the models' fit for both data samples are much effective compared to the exploratory model, with all associations remain significant, but with better path coefficients, p-values, and effect sizes.

Thus, it is concluded that persuasive visual leaves more impact on perceived behavioural intention, while non-persuasive visual is impacting perceived satisfaction more, evident with better path coefficients. This finding is in line with the User Interface (UI) guideline, highlighting the importance of simplicity in design in order to obtain better users' satisfaction with the UI. As such, additional visual elements on the persuasive website may make the page more crowded. Hence, violation of the simplicity rule justifies why users are less satisfied with the persuasive website. Yet, persuasive visual plays an important role in influencing behavioural intention. The result concludes and confirms to the existing literature (i.e. [26]–[28]) that discovered content and realism (pictures) to be strong predictors of users' beliefs, attitudes, and intentions toward a website. Furthermore, the observed variables in the model with the persuasive sample are better explained compared to the variables in the non-persuasive model, as highlighted through the improved R-squared indexes for the respective variables. Hence, further investigation on the full persuasive model is required to identify which persuasive visuals positively influence web users to stay at a website, and motivate them to make favourable decisions or actions. Likewise, the visuals that negatively affect the users should also be identified so that future designer can avoid making the unfavourable design mistakes.

## REFERENCES

- [1] S. Josephson, S. B. Barnes, and M. Lipton, 2010. *Visualizing the Web: evaluating online design from a visual communication perspective*, Volume 1. New York: P. Lang.
- [2] H. Kim and D. R. Fesenmaier, "Persuasive Design of Destination Web Sites: An Analysis of First Impression". *J. Travel Res.* vol. 47(1), pp. 3–13, 2008.
- [3] C. Jones, "Clout: The Role of Content in Persuasive Experience. In A. Marcus, (Ed.) *Design, User Experience, and Usability. Theory, Methods, Tools and Practice*. Heidelberg: Springer Berlin. 2011, pp. 582–587.
- [4] W. Winn and K. Beck, 2002. The Persuasive Power of Design Elements on an E-Commerce Web Site. *Tech. Commun.* vol. 49(1) pp. 17–35.
- [5] H.-L. Chu, Y.-S. Deng, and M.-C. Chuang, "Persuasive Web Design in e-Commerce. In F.-H. Nah, (Ed.) *HCI in Business SE*". Springer International Publishing. 2014, pp. 482–491.
- [6] R. B. Cialdini, 2007. *Influence: The Psychology of Persuasion*, Revised ed. HarperBusiness.
- [7] R. E. Guadagno and R. B. Cialdini, "Online Persuasion and Compliance: Social Influence on the Internet and Beyond," in *The Social Net: The Social Psychology of the Internet*, 2005, pp. 91–113.
- [8] R. E. Guadagno, N. L. Muscanell, L. M. Rice, and N. Roberts, 2013. Social influence online: The impact of social validation and likability on compliance. *Psychol. Pop. Media Cult.* 2(1): 51.
- [9] D. Lauterbach, H. Truong, T. Shah, and L. Adamic, 2009. Surfing a web of trust: Reputation and reciprocity on Couchsurfing.com. *12th IEEE International Conference on Computational Science and Engineering (CSE) 2009*, 346–353.
- [10] N. Nahai, 2012. *Webs of Influence: The Psychology of Online Persuasion*. FT Press.
- [11] N. Ibrahim, M. F. Shiratuddin, and K. W. Wong, 2014. Proposed Model of Persuasive Visual Design for Web Design. *25th Australasian Conference on Information Systems (ACIS2014)*, 2014.
- [12] N. Ibrahim, M. F. Shiratuddin, and K. W. Wong, 2013. A dual-route concept of persuasive User Interface (UI) design. *Int. Conf. Res. Innov. Inf. Syst.* November 2013. 2013: pp. 422–427.
- [13] N. Ibrahim, K. W. Wong, and M. F. Shiratuddin, "Persuasive Impact of Online Media: Investigating the Influence of Visual Persuasion". *Asia Pacific Conference on Multimedia and Broadcasting (APMediaCast 2015)*, 2015.
- [14] N. Ibrahim, M. F. Shiratuddin, and K. W. Wong, "Persuasion Techniques for Tourism Website Design". *International Conference on E-Technologies and Business on the Web (EBW2013)*, pp. 175–180, 2013.
- [15] H. Kim, 2008. Persuasive Architecture of Tourism Destination Websites: An Analysis of First Impression.
- [16] L. Tang, 2009. Destination websites as advertising: An application of Elaboration Likelihood Model. ProQuest, UMI Dissertations Publishing.
- [17] J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a Silver Bullet," *The Journal of Marketing Theory and Practice*, vol. 19, no. 2. pp. 139–152, 2011.
- [18] N. Kock, "Using WarpPLS in E-collaboration Studies: An Overview of Five Main Analysis Steps," *Int. J. e-Collab.*, vol. 6, no. 4, pp. 1–11, Oct. 2010.
- [19] M. D. Johnson and A. Gustafsson, 2000. *Improving customer satisfaction, loyalty, and profit: an integrated measurement and management system*. Jossey-Bass.
- [20] N. Kock, "Using Data Labels to Discover Moderating Effects in PLS-Based Structural Equation Modeling". *Int. J. e-Collab.* vol. 10(4), pp. 1–16, 2014.
- [21] T. D. Astolfo, 2015. *Distribution Evolution: How Travelers Search, Shop, Buy and Share*.
- [22] R. L. Rosnow, R. Rosenthal, and D. B. Rubin, "Contrasts and correlations in effect-size estimation". *Psychol. Sci. a J. Am. Psychol. Soc.* vol. 11(6), pp. 446–453. 2000.
- [23] J. Cohen, 1988. *Statistical power analysis for the behavioral sciences*.
- [24] S. A. Rusticus and C. Y. Lovato, 2014. Impact of Sample Size and Variability on the Power and Type I Error Rates of Equivalence Tests: A Simulation Study. *Pract. Assessment, Res. Eval.* vol. 19(11).
- [25] N. Kock, 2015. *WarpPLS 5.0 User Manual*. Laredo, TX: ScriptWarp Systems.
- [26] D. J. MacInnis and L. L. Price, "An exploratory study of the effects of imagery processing and consumer experience on expectations and satisfaction". *Adv. Consum. Res.* vol. 17(1), pp. 41–47, 1990.
- [27] D. W. Miller, J. Hadjimarcou, and A. Miciak. "A scale for measuring advertisement-evoked mental imagery". *J. Mark. Commun.* vol. 6, pp. 1–20 2000.
- [28] M. Jeong and J. Choi, "Effects of Picture Presentations on Customers' Behavioral Intentions on the Web". *Journal of Travel & Tourism Marketing*. vol. 17, pp. 193–204, 2004.