

The Role of Aesthetics Influencing User Satisfaction with Recruitment Websites

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Abstract

A theoretical model of potential job applicants' and searchers' satisfaction with a recruitment website is developed. Specifically, the influences of two aspects of a recruitment website's aesthetics are examined, aesthetic formality and aesthetic appeal. In addition, the model proposes antecedents to each dimension of website aesthetics. The three antecedents to website aesthetic formality are communication with visitors, information retrieval speed, and the quality of the job recruitment information. The two antecedents of website aesthetic appeal are website engagement and ease of website use.

The theoretical model is empirically tested using 199 questionnaire responses collected from both students enrolled in business courses at a medium-size university in the western United States and contract employees of Mechanical Turk. The questionnaire asked all respondents to complete part of the questionnaire first and then to access a specific company's recruitment website to complete scripted activities using the site. Upon finishing these activities, the respondents completed the remaining portions of the questionnaire.

The theoretical model is estimated using these 199 questionnaire responses and structural equation modeling. The quality of the fit between the model and the data is acceptable given the complexity of the model and the number of observations. All the measures of the theoretical constructs demonstrate desirable psychometric properties. The estimated structural model shows that all the antecedents have significant and positive influences on their respective measure of aesthetics and that these measures of aesthetics (website aesthetic formality and website aesthetic appeal) significantly and positively influence website satisfaction. Based on these results a discussion and conclusions are provided.

Keywords: recruitment website; website aesthetic appeal; website satisfaction; website aesthetic formality.

Introduction

Aesthetics is defined as the "visual appearance and appeal" of an entity or object (Sonderegger, Sauer, & Eichenberger, 2014, p.1180). The effects of aesthetics have been studied in a wide variety of contexts; including individuals' physical traits, music, graphics, signage, architecture, evolutionary biology and other diverse areas (Jacobsen, 2006). An early study on physical traits by Dion, Berscheid, and Walster (1972), for example, examined the effects of individuals' attractiveness on their perceived socially-desirable personal traits (e.g., occupational

success). Results found a positive correlation between the perceived desirable-trait and perceived attractiveness. Others found that individuals seen as aesthetically attractive were viewed as 'good' in a variety of areas, for example more likely to get hired, more competent, and more successful employees (Anthony, 2011; Brand, Bonatsos, D'Orazio, & DeShong, 2012). In aesthetics-oriented studies of art, reactions to art can include a wide variety of complex, multi-dimensional responses beyond 'pleasantness'; including interest (Turner & Silva, 2006), anger, and disgust (Silva & Brown, 2007), and cognitive stimulation, empathy, attraction, and others (Hager, Hagemann, Danner, & Schankin, 2012).

As use of the Internet has grown, the importance of website aesthetics has grown as well (Cortese & Bunz, 2009; Hoffmann & Krauss, 2004; Palmer, 2002; Sonderegger et al., 2014). Organizations, for example, use website aesthetics and other design features to help achieve such objectives as differentiating themselves from competitors, attracting and retaining customers and job-seekers, increasing employee engagement, and improving communication with all site users.

While the commonly espoused phrase, form follows function, implies that website aesthetics (i.e., form) is less important than website content (i.e., function), it may be more accurate to state that website form complements function (Tractinsky, Katz, & Ikar, 2000). For example, website aesthetics tend to increase users' perceptions of a site's credibility, which leads users to spend more time on the site, thereby viewing more content than they would otherwise (Cugelman, Thelwall & Dawes, 2009; Robins and Homes, 2008). It may also be more accurate to say that the distinction between form and function is not always clear, and that form (e.g., aesthetics) often plays a functional role, such as affecting perceptions of the site's ease of use (Tractinsky, 1997; Kurosu, M., & Kashimura, K., 1995). Thus, it is essential for designers to treat website aesthetics as both a critical form and functional factor that influence users' perceptions, engagement, and intentions.

The purpose of this manuscript is to better understand the role of aesthetics on job-seekers' reactions to recruitment websites. The first research objective is to examine the influence of website aesthetics in terms of both aesthetic appeal (i.e., form) and aesthetic formality (i.e., function) on users' satisfaction with a recruitment website. The second objective is to identify antecedents of aesthetic appeal and aesthetic formality. The organization of the manuscript is as follows. The manuscript begins with a review of the appropriate literature followed by the theoretical model and hypotheses. Next, the research method is presented including subsections regarding the sample, the measures, and the estimation of the model. The final sections of the manuscript include a discussion of the empirical results and conclusions.

The Literature

The rise of the Internet has changed how people gain access to information. This combined with the expansion of broadband, has transformed how information is displayed (Zickuhr & Smith, 2013) and what users expect from a website experience (Hasan, 2016). During the emergence of the World Wide Web in the early 1990s websites tended to be text-based with little concern or capability for aesthetics. As broadband expanded, organizations incorporated images, videos, and other design features to better communicate information to users; thereby elevating the importance of website aesthetics (Sonderegger et al., 2014).

With respect to attracting job-seekers with a recruitment-oriented website, organizations rely heavily on their website to communicate recruitment information to job-seekers early in the recruitment and selection process at a time when job-seekers often have little information about the organization upon which to make decisions. If the site fails to engage a qualified job-seeker, and the job-seeker chooses not to submit an application as a result, then the organization loses

an opportunity to employ more personal forms of recruitment that typically come after an application is submitted. In addition, if a site has a negative effect on a job-seeker's perceptions of the organization, the job-seeker may tell other potential job-seekers about the negative experience; thereby limiting the quality of future applicant pools. Thus, a job-seeker's experience on the recruitment website is critical for determining whether or not the organization's relationship with the job-seeker continues beyond this initial, relatively impersonal interaction between the job-seeker and the organization. Website aesthetics may play an important role in that initial experience (Wecksell, 2015).

Tractinsky (2004) has argued that aesthetics is an important missing dimension in management information systems and human computer interaction research. The relevance of aesthetics is grounded in the role which these technologies play in our everyday lives (Fishwick, 2008). For example, prior to the release of the first Apple iPhone, mobile phones were mostly used to call others. With the release of the iPhone, new ways to interact were incorporated into the design; from text messaging to taking pictures (Vanden Abeele, 2016); and now a mobile phone is also considered a fashion accessory (Katz and Sugiyama, 2006). This provides a useful example of how visual aesthetics, a beautiful or pleasing look, changes how we look at, and use, an information system; moving beyond efficiency, effectiveness, and decision speed to visual aesthetics influencing decisions, intentions, and actions (Tractinsky, 2004).

One reason that aesthetics matter to users is because the general level of system performance exceeds most users' needs. Furthermore, some aesthetically-based evaluations of systems are immediate and are hard to overcome if these evaluations are negative. Furthermore, aesthetics satisfies a basic human need through pleasure or engagement that serve as intrinsic rewards.

An early attempt to examine the influence of aesthetics in a software development context was performed by Goodwin (1987); studying website functionality and usability. Functionality was defined as the extent to which the developed system provided needed activities and tools; and usability was defined as the ability of the user to make use of the system to complete desired tasks. A primary finding of Goodwin's research was that usability matters. It might well be that in 1987 when the research was performed, usability was viewed as an early version of aesthetics (Fishwick, 2008). If viewed in this context, aesthetics, seen as usability, do matter.

The structure, dimensionalities, and definitions of aesthetics in an architectural setting were described in the work of Lang (1988). These concepts and definitions were applied to computer human interface design by Wang, Hernandez, and Minor (2010). In this article Wang et al. define two dimensions of website aesthetics, aesthetic formality and aesthetic appeal. They described aesthetic formality as simplicity, functional quality, and utilitarian value; and described aesthetic appeal as meaningfulness, emotional quality, and hedonic value. In a website context, aesthetic formality focuses on the website design and use to facilitate task performance and completion. Aesthetic appeal focuses on invoking meaning and emotional responses as well as hedonic value in or for the website user. In their research results, Wang et. al (2010) found that website aesthetic formality significantly influenced perceived online service quality and website aesthetic appeal significantly influenced website satisfaction. Coursaris and van Osch (2016) found that website aesthetics was a stronger predictor of user satisfaction than were effectiveness, efficiency, or playfulness.

Papachristos and Avouris, (2009) investigated aesthetic impressions and user preferences in website design; mapping two aesthetics factors from the work of Coates (2003) to website

design. Specifically, they mapped Coates “Concinnity” (i.e., order and sense) to what they termed “Classical” website aesthetics (p. 119); focusing on symmetry, order, and a clear design. They also mapped Coates “Information” (i.e., contrast and novelty) to “Expressive” web aesthetics (p. 119), which focuses on creativity and originality. Relating these terms to the study at hand, classical webaesthetics is related to our aesthetic formality and expressive web aesthetics is related to our aesthetic appeal. Papachristos and Avouris, (2009) found that a balance between classic and expressive webaesthetics resulted in higher attractiveness and preference ratings regarding the website. This leads to the potential conclusion that a combination or balance of aesthetic formality and aesthetic appeal could positively influence users’ evaluations of a website.

Cyr, Head, and Ivanov (2006) developed and empirically tested a model linking design aesthetics to customer loyalty in a mobile environment, which was mediated by perceived usefulness, ease of use, and enjoyment. Design aesthetics were shown to significantly influence mobile loyalty through, either directly or indirectly, perceived usefulness, ease of use, and enjoyment. In their study, design aesthetics was described as emotional appeal of a website expressed through color, shape, font type, music, or animation. Notice that in the context of the aesthetic definitions above, their design aesthetics are consistent with aesthetic appeal. Furthermore, among the mediating variables, enjoyment would also be in the category of aesthetic appeal, while perceived usefulness and ease of use would fall in the category of aesthetic formality.

Moshagen and Thielsch (2010) further extended the concept of aesthetic appeal and perceived usability by constructing a tool to assess visual aesthetics of websites. The four facets identified were simplicity, diversity, colorfulness, and craftsmanship. Simplicity is similar to symmetry as identified by Papachristos and Avouris (2009); whereas the diversity facet is more in line with novelty, as identified by Coates, and creativity. Therefore, if a website is too simple it lacks diversity. The colorfulness facet relates to the placement of color and how colors have been combined to create a unique effect (Cyr, Head, & Larios, 2010). Extensive research on the appeal of colors in such things as food, consumer products, and information systems has found that participants prefer colors with positive associations (Albers, 2013; Arnheim, 1954; Dorai & Venkatesh, 2002; Guilford & Smith, 1959; Imram, 1999; Lindgaard, Dudek, Sen, Sumegi, & Noonan, 2011; Madden, Hewett, & Roth, 2000). For example, a website which uses blue and white colors can be associated with blue skies and white clouds, giving a positive perception of the site. Palmer and Schloss(2010) described this as ecological valence theory meaning that users “should be attracted to colors associated with salient objects that generally elicit positive affective reactions” (p. 8878). Finally, the craftsmanship facet refers to how a site is laid out and, in particular for a website, if the layout appears to have used current technologies. For example, current websites have access to videos which can be embedded into the text, whereas the first generation websites primarily relied on the use of color to highlight items.

Zhang and Li (2005) examined affective quality and found that usability and aesthetics are both important in creating pleasurable electronic products. Perceived affective quality was defined along the dimensions of arousal/sleepy, pleasant/unpleasant; and in a website setting can be labelled as aesthetic appeal. The affective quality measures were shown to significantly influence the aesthetic functionality variables of perceived usefulness and ease of use.

In a study of habit and website quality influences on e-commerce continuance intentions (mediated by trust and perceived usefulness) Liao, Palvia, and Lin (2006) defined four dimensions of website quality. These dimensions were appearance, content quality, specific quality, and technical adequacy. Appearance would be considered aesthetic appeal, while content quality, specific quality, and technical adequacy would be considered aesthetic formality. In

addition, Wei-Chen (2011) studied the effects of e-service quality and information and system quality on customer satisfaction. If the e-service quality is positive from a travel website, high customer satisfaction and positive recommendations result. Quality also affects the credibility perceptions of the information as influenced by first impressions (Alsudani & Casey, 2009; Robins & Holmes, 2008). If a website's information is not aesthetically pleasing, a user will deem the site not credible and leave the site within seconds; the longer a user stays on the site and views the content, a more extensive assessment of website quality can occur.

In a research extending the Technology Acceptance Model (TAM), van der Heijden (2003) incorporated perceived visual attractiveness into TAM to explain individual acceptance and usage of websites. Perceived attractiveness was defined as "the degree to which a person believes that the website is aesthetically pleasing to the eye" (p. 544). Results showed that perceived attractiveness significantly influenced perceived usefulness, ease of use, and enjoyment. In the framework presented earlier, perceived attractiveness and enjoyment would be classified as aesthetic appeal, while perceived usefulness and ease of use would be aesthetic formality.

Cheung and Vogel (2013) used the TAM to study user acceptance in a context of collaborative, sharing technologies implemented as Google applications. These types of collaborative technologies affected visual attractiveness through ease of use and usefulness. If information is easy to share on a site then a user will perceive the site to be useful.

Finally, visual aesthetics has been shown to influence trust (Cyr et al., 2010; Green & Pearson, 2011; Harris & Mark, 2010; Li & Yeh, 2010; Pengnate & Sarathy, 2017; Sonderegger et al., 2014; Wann-Yih & Ching-Ching, 2015). Li and Yeh (2010), found that design aesthetics positively influenced trust in mobile commerce through positively influencing perceived usefulness, ease of use, and customization. Within the framework of the research study presented here, notice that design aesthetics is consistent with our definition of aesthetic appeal and the remaining constructs would be in our aesthetic formality category. Sonderegger et al (2014), found that trustworthiness was influenced by both classical and expressive aesthetics when a user had extended time to review a website (2014). Classical aesthetics is related to Lavie and Tractinsky's(2004) definition of formal aesthetics and expressive aesthetics relates to aesthetic appeal.

The Model and Hypotheses

Based on the above literature, a theoretical model and corresponding hypotheses are presented. This model's dependent variable is recruitment website users' satisfaction with the site (i.e., website satisfaction). Website satisfaction is influenced by aesthetic formality, measured by website perceived usefulness, and website aesthetic appeal. Several determinants of each website aesthetics measure are also proposed. Those related to website aesthetic formality or website perceived usefulness are communication with visitors to the site, informational retrieval speed, and quality job recruitment information. The antecedents to website aesthetic appeal relate to website users' engagement with the website and website ease of use. The theoretical model and hypotheses are displayed in Figure 1 and the corresponding hypotheses described as follows.

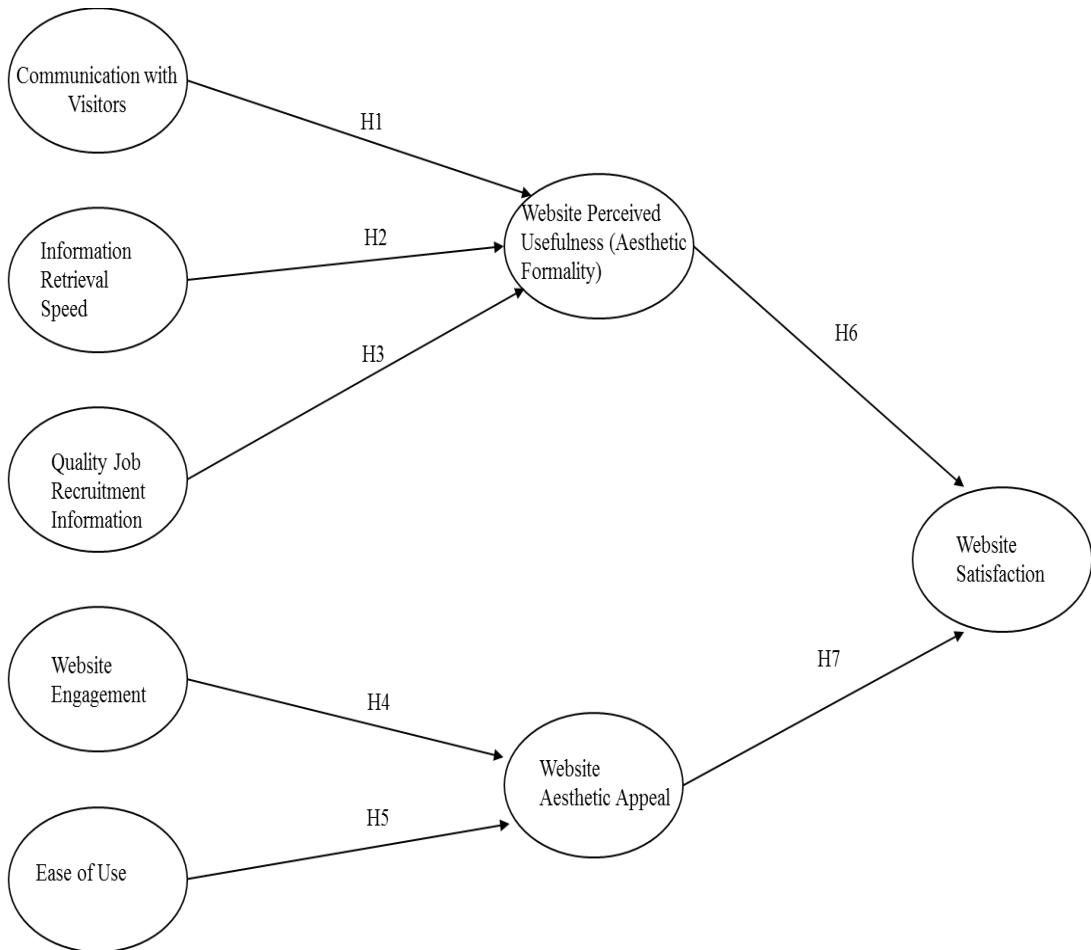


Figure 1: The Theoretical Model and Hypotheses

Hypotheses 1-3 relate to the antecedents influencing website aesthetic formality. These three measures are facilitating communication with visitors, information retrieval speed, and the quality of the job recruitment information the user receives from the website. These hypotheses are formally stated below.

Hypothesis One (H1): Communication with visitors from the website significantly and positively influences website aesthetic formality measured as website perceived usefulness.

Hypothesis Two (H2): Information retrieval speed from the website significantly and positively influences website aesthetic formality measured as website perceived usefulness.

Hypothesis Three (H3): Quality job recruitment information from the website significantly and positively influences website aesthetic formality measured as website perceived usefulness.

The next two hypotheses relate to two user perceived antecedents to website aesthetic appeal. These antecedents are the website user's engagement with the website as well as their perceptions of the website's ease of use. These two hypotheses are formally stated below.

Hypothesis Four (H4): User website engagement significantly and positively influences website aesthetic appeal.

Hypothesis Five (H5): User perceptions of the website's ease of use significantly and positively influences website aesthetic appeal.

The final two hypotheses examine the influences of website aesthetic formality and website aesthetic appeal on the user's satisfaction with the recruitment website. These two hypotheses are shown below.

Hypothesis Six (H6): User's perceptions of website aesthetic formality measured as website perceived usefulness have significant and positive influences on website satisfaction.

Hypothesis Seven (H7): User's perceptions of website aesthetic appeal have significant and positive influences on website satisfaction.

Research Method

The Sample

The data were collected by circulating a questionnaire to potential respondents using two distribution methods. The first method used students enrolled in required business courses at a medium-sized university in the western United States. The second was to contract with WebTurk on Amazon.com to have their contract workers complete the questionnaire and associated activities. The total sample size was 199 respondents composed of 99 completed questionnaires from students and 100 completed by WebTurk contract workers.

The questionnaire administration process had several steps. Respondents were first asked to complete a subset of the questionnaire items related to the students and not website use. Next, they were given the name of one of four companies and the name of a job opening at that company. They were instructed to go to the company website, find the job position listing and initiate the job application process. Respondents were then directed to search and identify another potential position of interest for the future. After completing these activities on the assigned website, respondents answered the remaining items on the questionnaire. While the names of the companies whose websites were used are not revealed for privacy reasons, the percentage of responses for each company included in the sample are shown in Table 1. The breakdown of the representation of these companies in the sample is roughly 40%, 25%, 20%, and 15%. The company assignment to respondents was done randomly within the web-based survey software used. The uneven percentages across these companies was due to a mistaken parameter setting in this software producing the uneven yet random assignments of companies.

Table 1: The Sample Demographics

Observation Source	Frequency	Percentage in Sample
WebTurk	100	50.25%
Students	99	49.75%
Total	199	100.00%

Company ^a	Frequency	Percentage in Sample
1	80	40.20%
2	50	25.13%
3	39	19.60%
4	30	15.08%
Total	199	100.01% ^b

a. Company names redacted.

b. Details do not sum to 100% due to rounding.

Majors of the student respondents in the sample.

Major	Frequency	Percentage in Sample
Accounting	25	12.56%
Business Economics	9	4.52%
Finance	28	14.07%
Information Systems	7	3.52%
Management & Human Resources	24	12.06%
Marketing	22	11.06%
Operations Management	17	8.54%
PGA Golf Management	3	1.51%
Other	9	4.52%
Non-Students & Missing Responses	55	27.64%
Total	199	100.00%

The final demographic collected for the sample was the declared major of the respondents. These percentages of majors ranged from 1.51% to 14.07%. The most interesting value was that the largest response category was non-students and missing responses at 27.64%. From this result it appears that a number of the contract workers at WebTurk are business students who reported their majors on their questionnaire response.

The Measures

The measures to empirically test the theoretical model were formed by responses to appropriate questionnaire items. A confirmatory factor analysis was performed using PC SAS version 9.4 to validate these measures and evaluate their psychometric properties. All the measures in the confirmatory factor analysis were reflective in their indicants and allowed to pairwise correlate. Using this approach, the cross construct measure loadings are forced to zero. This allows the overall fit of the model to the data as well as the discriminant validity tests to be calculated to evaluate how well the items loaded on the appropriate construct measure. The statistics summarizing the quality of the fit between the data and the estimated model were acceptable (Hair, Anderson, Tatham, & Black, 1992). The goodness of fit measure was 0.87 and adjusted for degrees of freedom it was 0.83. The parsimonious goodness of fit was 0.71. The root mean square residual was 0.03 and its standardized version was 0.05. The chi-square statistic was 371.28 with 224 degrees of freedom. It was statistically significant at a 1% level. The normed chi-square statistic was 1.66. The root mean square error of approximation was estimated to be 0.06 with a 90% confidence interval of 0.05 to 0.07. Bentler's comparative fit index was 0.95. The incremental fit indexes (i.e., Bentler and Bonett's non-normed and normed indexes; Bollen's normed and non-normed indexes) ranged from 0.86 to 0.95.

Each of the eight theoretical constructs were measured by collecting appropriate questionnaire item responses. The first three of these items measured communication with visitors. These questionnaire items were developed from the research by Liu (2003). Using the results from the confirmatory factor analysis, the item estimates or standardized path coefficients were 0.74, 0.80, and 0.70. Using these item estimates, the measure's calculated composite reliability was 0.79 and the percentage of shared variance extracted was 56%. The second measure was information retrieval speed which was measured using two questionnaire items also

developed from the work of Liu (2003). The item estimates were 0.73 and 0.86 producing a composite reliability coefficient for 0.78 and 64% of shared variance extracted.

The quality of job recruitment information was measured using two questionnaire items developed based on items from the research of Green and Pearson (2011). Their item estimates from the confirmatory factory analysis were 0.80 and 0.91 with a composite reliability coefficient of 0.85 and a percentage of shared variance extracted of 73%. The fourth measure was website engagement measured by four questionnaire items derived from the research of Webster and Hackley(1997). The estimated coefficients were 0.88, 0.82, 0.76, and 0.76. The calculated composite reliability coefficient was 0.88 with a shared variance extracted of 65%. The ease of use construct was also measured by four questionnaire items. These items were modified from the research of Green and Pearson (2011). The estimated coefficients for these items were 0.82, 0.88, 0.86, and 0.82, respectively. From these estimates the composite reliability coefficient was calculated to be 0.91 and the percentage of shared variance extracted was 71%.

Three items modified from the work of Liu, Li, and Hu (2013) and Loiacono, Watson and Goodhue (2007) were used to measure the website aesthetic appeal construct. The estimated standardized coefficients were 0.89, 0.82, and 0.94. The resulting composite reliability coefficient was estimated to be 0.92 with a corresponding percentage of shared variance extracted of 78%. Three questionnaire items were also used to measure the construct of website perceived usefulness or aesthetic formality. These items were modified from those published by Green and Pearson (2011). The estimated coefficients were 0.82, 0.88, and 0.79. The composite reliability coefficient was 0.87 with a percentage of shared variance extracted of 69%. The final measure was website satisfaction which was measured using three questionnaire items modified from those developed by Devaraj, Fan, and Kohli(2002). The estimated path coefficients were 0.85, 0.78, and 0.87 with a composite reliability estimate of 0.87 and 70% shared variance extracted. All these questionnaire items and standardized path coefficients are shown in Table 2.

Table 2: The Indicants, Measures and Psychometric Properties Using Standardized Path Coefficients

Indicant	Standardized Path Coefficient	Composite Reliability	Percentage of Shared Variance Extracted
Communication with Visitors		0.79	56%
1. The website is effective in gathering visitors' feedback.	0.74		
2. This website facilitates two-way communication between the visitors and the site.	0.80		
3. The website makes me feel that the company wants to listen to its visitors.	0.70		
Information Retrieval Speed		0.78	64%
4. Getting information from the website is very fast.	0.73		
5. I was able to obtain the information I wanted quickly.	0.86		
Quality of Job Information		0.85	73%
6. The website includes good job information.	0.80		
7. The website includes information about each job that is helpful.	0.91		
Website Engagement		0.88	65%

This website. . . .			
8. Kept me total absorbed in the information.	0.88		
9. Held my attention.	0.82		
10. Excited my curiosity.	0.76		
11. Is intrinsically interesting.	0.76		
Ease of Use			
When I think about this company's website		0.91	71%
12. My interaction with this company's website was clear and understandable.	0.82		
13. I find this company's website easy to use.	0.88		
14. I find it easy to locate the information I need in this company's website.	0.86		
15. It is easy for me to use this company's website.	0.82		
Website Aesthetic Appeal		0.92	78%
The website			
16. Is visually pleasing.	0.89		
17. Includes attractive layouts.	0.82		
18. Is original.	0.94		
Website Perceived Usefulness (Aesthetic Formality)		0.87	69%
Regarding the company's website			
19. Overall, I find this company's website useful.	0.82		
20. The content on this company's website is helpful to me.	0.88		
21. I think this company's website is valuable to me.	0.79		
Website Satisfaction		0.87	70%
22. Overall I am satisfied with this place.	0.85		
23. I think I did the right thing when I decided to use this website.	0.78		
24. Overall, I was satisfied with this website experience.	0.87		

Based on the magnitudes of the estimated standardized path coefficients that ranged from 0.70 to 0.94, it can be argued that item reliability was satisfied (Rainer & Harrison, 1993). In terms of composite reliability, all the measures demonstrated acceptable values based on the calculated reliability coefficients ranging from 0.78 to 0.92 (Nunnally, 1978). Additionally, all the shared variance extracted percentages were above 50%. The combination of these results indicates that the measures satisfy convergent validity (Igbaria & Greenhaus, 1992; Rainer & Harrison, 1993).

Discriminant validity was also examined by comparing, for each pair of measures, its squared correlation to the individual measures' percentages of shared variance extracted. If discriminant validity is satisfied, the items within a measure share greater common variation among themselves than between the two measures. This is demonstrated when, for each measure pair, the individual measures' percentage of shared variance extracted are greater than the squared correlation between the two measures (Fornell & Larcker, 1981). All the correlations were calculated using the confirmatory factor analysis and are reported in Table 3 along with the squares of these correlations. The percentages of shared variance extracted are shown in Table 2. From these values, it is seen that discriminant validity was satisfied for all the measures. The largest estimated squared correlation between measures was 0.50 for website perceived

usefulness (aesthetic formality) and website satisfaction. The smallest percentage of shared variance extracted was 56% for communication with visitors. As a result, since convergent and discriminant validity are both satisfied, it can be argued that construct validity is satisfied (Hair, Anderson, Tatham, & Black, 1992).

Table 3: The Correlations and Squared Correlations among the Measures

Pairs of Measures	Correlation	Squared Correlation
Communication with Visitors-Information Retrieval Speed	0.50	0.25
Communication with Visitors-Quality Job Information	0.29	0.08
Communication with Visitors-Website Engagement	0.49	0.24
Communication with Visitors-Ease of Use	0.52	0.27
Communication with Visitors-Website Aesthetic Appeal	0.30	0.09
Communication with Visitors-Website Perceived Usefulness (Aesthetic Formality)	0.45	0.20
Communication with Visitors-Website Satisfaction	0.53	0.28
Information Retrieval Speed- Quality Job Information	0.36	0.13
Information Retrieval Speed- Website Engagement	0.41	0.17
Information Retrieval Speed- Ease of Use	0.70	0.49
Information Retrieval Speed- Website Aesthetic Appeal	0.42	0.18
Information Retrieval Speed- Website Perceived Usefulness (Aesthetic Formality)	0.47	0.22
Information Retrieval Speed- Website Satisfaction	0.50	0.25
Quality Job Information- Website Engagement	0.42	0.18
Quality Job Information- Ease of Use	0.47	0.22
Quality Job Information- Website Aesthetic Appeal	0.41	0.17
Quality Job Information- Website Perceived Usefulness (Aesthetic Formality)	0.60	0.36
Quality Job Information- Website Satisfaction	0.56	0.31
Website Engagement- Ease of Use	0.54	0.29
Website Engagement- Website Aesthetic Appeal	0.63	0.40
Website Engagement- Website Perceived Usefulness (Aesthetic Formality)	0.66	0.44
Website Engagement- Website Satisfaction	0.70	0.49
Ease of Use- Website Aesthetic Appeal	0.50	0.25
Ease of Use- Website Perceived Usefulness (Aesthetic Formality)	0.70	0.49
Ease of Use- Website Satisfaction	0.70	0.49
Website Aesthetic Appeal- Website Perceived Usefulness (Aesthetic Formality)	0.60	0.36
Website Aesthetic Appeal- Website Satisfaction	0.61	0.37
Website Perceived Usefulness (Aesthetic Formality)-Website Satisfaction	0.71	0.50

The Estimation of the Model

The model shown in Figure 1 was estimated using a structural equations modeling approach, procedure Calis in PC SAS version 9.4. Maximum likelihood was the estimation method used. The measures were all reflective in the questionnaire items used to measure the underlying latent construct. The exogenous measures were scaled by setting their standard

deviations equal to one while the endogenous measures were scaled by setting the path to one of its indicants equal to one.

The quality of the fit of the estimated model to the data is summarized by several statistics, which are shown in Table 4. The goodness of fit index was 0.84 and the chi-square statistic was 466.79 with 235 degrees of freedom. The chi-square statistic was statistically significant at a 1% level. The normed chi-square statistic was 1.99 and the root mean square residual was 0.04 with its standardized counterpart estimated at 0.08. The adjusted goodness of fit index was 0.80 while the parsimonious goodness of fit index was 0.72. The root mean square error of approximation was 0.07 and its 90% confidence interval ranged from 0.06 to 0.08. The Bentler comparative fit index was 0.93 and the incremental fit indexes (i.e., Bentler-Bonett's normed and non-normed indexes and Bollen's normed and non-normed indexes) ranged from 0.84 to 0.93. These summary statistics indicate an acceptable fit between the model and the data (Hair et al., 1992; Hooper, Coughlan, & Mullen, 2008; Rainer & Harrison, 1993). All these values are displayed in Table 4.

Table 4: The Summary Statistics of the Fit between the Model's Estimation and the Data

Statistic	Value
Goodness of Fit Index	0.84
Chi-square Statistic (235 degrees of freedom)	466.79**
Normed Chi-square Statistic	1.99
Root Mean Square Residual	0.04
Standardized Root Mean Square Residual	0.08
Adjusted Goodness of Fit Index	0.80
Parsimonious Goodness of Fit Index	0.72
Root Mean Square Error of Approximation (RMSEA)	0.07
RMSEA 90% Confidence Interval	0.06 to 0.08
Bentler Comparative Fit Index	0.93
Bentler-Bonett Normed Fit Index	0.86
Bentler-Bonett Non-normed Fit Index	0.91
Bollen Normed Fit Index	0.84
Bollen Non-normed Fit Index	0.93

The estimation details of the measurement and structural models are shown in Figure 2 using standardized path coefficients. In the measurement model, all the paths between the measures and the corresponding indicants were statistically significant at a 1% level. Additionally, the variance explained by each of these measures were: 45% for website aesthetic appeal; 61% for website perceived usefulness; and 59% for website satisfaction. All the structural paths between the measures were also statistically significant at a 1% level with all the paths having the hypothesized signs. Thus, all the hypotheses were statistically supported.

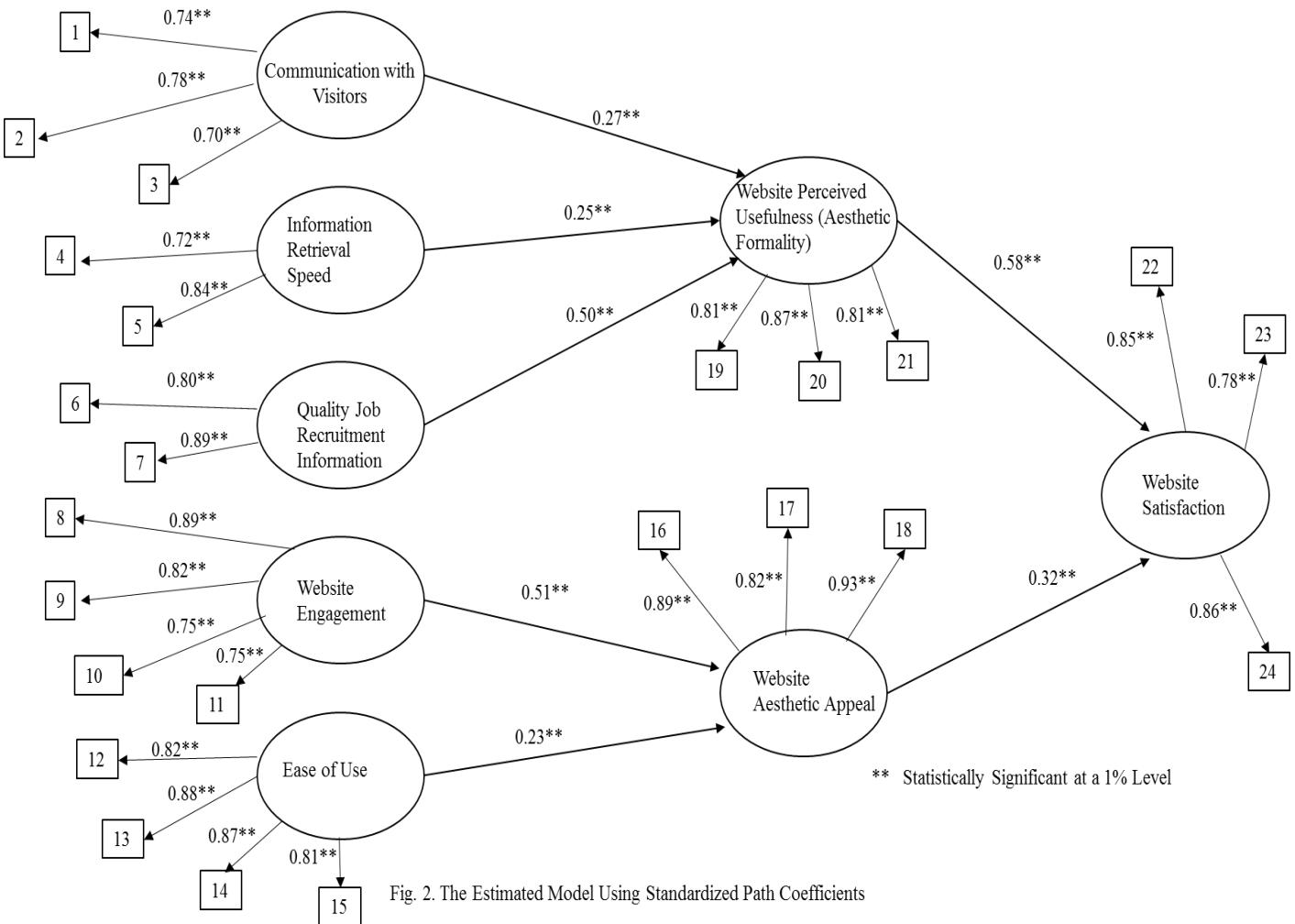


Fig. 2. The Estimated Model Using Standardized Path Coefficients

Figure 2: The Estimated Model Using Standardized Path Coefficients

Discussion

The empirical results showed statistical support for all seven hypotheses expressed in the theoretical model. These results indicate that website satisfaction is significantly and positively influenced by aesthetic formality (H6), measured by website perceived usefulness, and website aesthetic appeal (H7). In the context of this research study, job recruitment websites, the results indicate that user satisfaction with a recruitment website is positively influenced by website aesthetic appeal and aesthetic formality. As companies have transitioned to web-based recruiting, communicating with website visitors, and accepting applications and supporting materials, it is important for website designers and developers to consider both the form (aesthetic appeal) and the function (aesthetic formality) of these websites for user satisfaction.

Additional results from this research indicate the importance of the antecedents of both website aesthetic formality and website aesthetic appeal. Website aesthetic formality or perceived usefulness is positively and significantly influenced by all three antecedents (H1, H2, and H3). From these results, the ability to communicate with visitors, the information retrieval speed, and the quality of the job recruitment information on the website all positively influence aesthetic formality in a meaningful fashion. By designing and developing the recruitment website so applicants and job searchers (i.e., website visitors) can efficiently and effectively communicate with the organization, aesthetic formality of the website is improved. A potential approach to

accomplish this is to incorporate aspects of a relationship management system for potential job applicants and searchers to facilitate communication between these individuals and the organization's human resource management group.

The antecedent of information retrieval speed also positively influences aesthetic formality in a meaningful fashion. This implies that when designing and developing a recruitment website consideration must be given to the technical aspects of information retrieval speed. The website must be sufficiently robust to efficiently work with all types of technology platforms used by potential job applicants and searchers. What can be controlled by these designers and developers are the characteristics of display and speed of content download on the recruitment website. Any animation or display on the recruitment website should be selected to function with minimal technological capabilities of any user's computer or device. The key is to develop the job recruitment website considering the likely user's technological platform.

The final antecedent influencing aesthetic formality is the quality of the job recruitment information on the recruitment website. Users of the site have specific information needs driving their visit to the website. It would appear that the key to accomplishing this for developers and designers is to consider the information needs of potential job applicants and searchers to assure the information they need is readily available on the website.

The antecedents of website engagement and ease of use were shown in the empirical results to positively influence website aesthetic appeal in significant and positive fashions (H4 and H5). Making the recruitment website engaging for the potential job applicant to use amounts to entertaining and holding the individual's interest while they use the website. Such engagement can be accomplished by stimulating their curiosity. Notice that the degree of website engagement may be limited to some degree by the need to provide appropriate information retrieval speeds which influence aesthetic formality. The ease of use for the recruitment website from the perspective of a potential job applicant and searcher can be influenced by the layout of the website. The hope is to make sure users can easily and possibly intuitively find the information they want and perform the task they require.

Conclusions

The staffing process is often described as a series of steps representing an evolution of the relationship between an organization and a job-seeker (Breaugh & Starke, 2000). Early in the process little is known about each other (Walker, Bauer, Cole, Berneth, Field, & Short, 2013) and contact between the parties is relatively impersonal (e.g., job-seeker viewing a recruitment website). If a job-seeker chooses to withdraw from the process prior to submitting an application then the relationship ends before the organization has an opportunity to use more personalized recruitment activities that are more typical in later stages of the process (Allen, Mahto, & Otundo, 2007; Van Hoye & Lievens, 2009). It is for this reason that using a website to attract, recruit, and engage job-seekers creates a unique challenge for organizations.

The current research found that a job-seeker's level of satisfaction is positively influenced in a meaningful fashion by aesthetic appeal and aesthetic formality of the recruitment website. Furthermore, the results showed that the proposed antecedents to the two aesthetics measures were also significant. Specifically, communication with visitors, information retrieval speed, and the quality of job recruitment information influence aesthetic formality in meaningful, positive fashions. Additionally, it was shown that website engagement and ease of website use both influence website aesthetic appeal in meaningful, positive fashions.

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