Creation of an Instrument to Measure Website Effectiveness Using the Analytic Hierarchy Process (AHP)

E

Ron Cheek
University of Louisiana Lafayette, USA

Martha L. Sale
Texas A&M University – Kingsville, USA

Colleen Schwarz
University of Louisiana Lafayette, USA

INTRODUCTION

The impact and importance of website design on organizations of all sizes continues to dramatically increase. In 2001, Michal Porter rationalized that the World Wide Web (WWW or W3) would have a dramatic impact on organizational business practices and strategies. Indeed, websites provide a way for customers, potential customers, employees, and other visitors to interact with the organization without time barriers and across geographic distances. The question for many organizations is, "How do they measure their websites compared to others both inside and outside their industries? What are the 'good components' in the design of a website?"

Limited academic research has been done in the area of strategic website design. The purpose of this research was the development of a measurement instrument that could be used by organizations to produce an internally consistent, robust measure of their website design. In our research, 900 surveys were conducted from Inc. Magazine's Top 500 list (2011-13) of fastest growing companies in the United States. The analysis of these surveys resulted in a list of shared elements (best practices) common to the websites surveyed. Through the use of the Analytic Hierarchy Process (AHP) Multi-attribute Decision Model, we developed a measure by which companies can assess their web presence in comparison to this best practices model. This model provides an internally consistent, robust model against which to measure an organization's website.

Although much work has been done on the individual components of websites design, little work has looked at the overall look and functional design of a website. These are in fact the components exerting a direct impact on the public's perception of the organization's brand. Newman and Landay (2000) proposed that the areas of navigation, information, and visual design should also be considered. Fan and Tsai (2010) suggest that visual components may indeed be the most important and valuable components of a website.

Websites provide a valuable opportunity to interact with existing and potential customers as well as other interested parties on a one-on-one basis. Organizations of all types provide virtual addresses for customers, potential customers, employees, and other visitors. An organization's website is often the first point of contact for visitors (Schmidt & Ralph, 2013). Despite the increased importance of organizational websites, limited research has been conducted to develop an internally consistent, robust measure for

website design. In our research, we conducted 900 surveys of Inc. Magazine's Top 500 fastest growing companies in the United States. These surveys were utilized to develop a "best practices" approach for the measurement of effective organizational websites, through the use of the Analytic Hierarchy Process (AHP) Multi-attribute Decision Model. The model offers an internally consistent, robust measure against which an organization's website can be compared.

This research provides a contribution to the literature through the development of a measure that allows for a systematic process to evaluate web presence using the results from an Analytic Hierarchy Process (AHP) model.

BACKGROUND

New applications and social media tools have a high impact on internet traffic, and websites are being continually created. These social media tools demand continuous change and adaptations by organizational websites. Top-level peer-reviewed journals may take anywhere from 2-3 years for an article to be published. By that time, the standards for websites have gone through several iterations.

In their book "Absolute Value," Stanford Professor Itamar Simonson and Emanuel Rosen (2014) offer unique insight on the value of an organization's website and its role in consumer behavior. From their perspectives, an organization's website plays a significant role in customer relations. They found that organizational websites exert an impact on customer segmentation, positioning, and overall brand value. The design and function of an organization's website enhances its brand value. Additionally, many organizations fail to recognize the importance of the organization's online presence and its impact on consumer perceptions and behaviors.

Tang and Jang (2014) explain that few studies have actually been done examining the information, communication, and strategies for organizational websites. They posit that with the increasing importance of websites on overall organizational performance, additional research and studies is needed. Blom et al. (2014) found that the deliberative process to respond to commenters, which was long used by newspapers, was no longer sufficient. The value of forums attached to opinion articles on the websites of 15 major U.S. newspapers supported the needs of their readers. Fry (2014) explains that with the 25th anniversary of the World Wide Web (www), the importance of an organization's online presence (website) has never had greater significance.

DeVries and Carlson (2014) found with the dramatic rise of social media, a website presence was a determining factor in an organization's brand value. An effective website could positively impact the consumer's perception of overall organizational brand value. The enhancement of an organization's website has the potential to improve customer involvement and increase return on investment. By adding experiential benefits, organizations were able to increase aesthetics, service excellence, and increase customers' interaction with organizations (Saeed et al, 2014).

CHALLENGES IN ORGANIZATIONAL WEBSITE DESIGN

The "digital revolution" entered its second decade in the 21st century. Organizations now recognize the importance of providing a well-designed web presence, with some organizations investing in site redesign after recognizing the impact of the website. Effective website design begins with a framework that is consistent with an organization's overall goals (Simeon, 2010). However, many organizations

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