

Association for Information Systems

AIS Electronic Library (AISeL)

ICEB 2014 Proceedings

International Conference on Electronic Business
(ICEB)

Winter 12-8-2014

How Website Design Quality Affects Flow Experience and User Satisfaction: A Comparison of Behavioral and Neuroscience Studies

Ting-Peng Liang

Sih-Fan Chen

Follow this and additional works at: <https://aisel.aisnet.org/iceb2014>

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2014 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

HOW WEBSITE DESIGN QUALITY AFFECTS FLOW EXPERIENCE AND USER SATISFACTION: A COMPARISON OF BEHAVIORAL AND NEUROSCIENCE STUDIES

Ting-Peng Liang, National Sun Yat-sen University, Taiwan China, tплиang@mail.nsysu.edu.tw

Sih-Fan Chen, National ChengChi Univeristy, Taiwan, sunny61030@gmail.com

ABSTRACT

The quality of website design is a main factor that affects user experience and satisfaction with an e-commerce site. This has been confirmed by many existing literature. However, most of these studies are based on user response through questionnaire surveys. It is well-known that user responses are potentially inaccurate and are subjective to the common method bias. Recently, neuroscience method that takes advantage of neuro-scientific equipment to collect psychophysiological evidence has gained much attention in social sciences and information systems. Therefore, it is interesting to compare our findings from behavioral and neuroscience studies to see whether this new method may provide insights into our understanding of website design effect.

With the above purpose in mind, this study designed a field experiment on existing e-tailing websites in Taiwan and China. Both behavioral and neuroscience methods were applied to collect data about their flow experience and user satisfaction. The particular instrument for collecting brain wave data was a one-point electro-encephalogram (EEG), which is useful for measuring attention and relaxation. Our research model includes five main website design factors (convenience, aesthetics, content, interactivity and customization) as independent variables, flow experience as a mediator, and user satisfaction as the dependent variable. Our results indicate that all five design factors had significant impact on the flow experience and the flow experience had significant positive effect on user satisfaction in our behavior study. Our neuroscience study, however, shows different findings: only convenience, content, and customization had positive impact on the flow experience. Although the effect of flow experience (measured by attention and relaxation) on user satisfaction still exist, but the R-square value is much lower (reduced from 0.56 to 0.10). We argue that there are two possible interpretations: one is that the measurement we used may not be able to capture the full flow experience as a questionnaire could do. Another alerting explanation is that previous research on flow experience and user satisfaction may have overlooked the potential common method bias issue in analyzing their data.

Keywords: Neuros IS, website design, flow experience, user satisfaction.