Comments on Lascu and Clow (2008)

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Lascu and Clow provide a helpful literature review into web site satisfaction, detail a repeatable process for other researchers and propose their own scale of website interactivity with four subscales with low-to-strong internal reliability. The major disadvantage of the new scale is one-third of the 15-item questionnaire measures aspects of customer service center quality. Although such measures of 'Customer Centeredness' are important, it tends to be less universally helpful to many large e-commerce websites which have little telephonic interaction with their customers.

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Lascu and Clow (2008) provide a comprehensive review of 'information satisfaction' from the marketing and information systems literature. They define satisfaction as the difference between expectations and actual performance.

The authors created a new scale to assess information satisfaction and to fill the gaps that existing scales do not measure. In creating a new instrument, the authors did what seems to be a comprehensive literature review of the marketing and information system literature. For the present purpose, the review was limited in scope as it did not cross into traditional sources of scale construction in human–computer interaction (e.g. Computer Human Interaction and Human Factors and Ergonomics Society proceedings) which would seem to be relevant for the type of application.

Items were created from

(1) The IS and marketing literature review
(2) Interviewing experts and power internet users: the authors use an interesting approach by conducting interviews with 4 individuals responsible for external communication from business and non-profits and 62 business students who reported high levels of online shopping. The purpose of the interviews was to tease out what factors make excellent websites.
(3) A professor and two graduate students read popular press publications on internet usage and came up with yet more items.

A total of 132 items were generated, and then redundant and leading items retained (leaving 75). Five judges trained in 'scale purification' further winnowed the items after retaining only those that were representative of user expectations of excellent websites.

The 75 items were administered to 454 students screened to have extensive internet experience and engaged in online shopping on a regular basis. The items were administered to the students, but the authors did not state whether the students were asked to evaluate specific websites, a recent website or just their attitudes about websites in general.

After conducting a factor analysis (did not appear to use any rotation), the authors retained 15 items which had high factor loadings (>0.50), eigenvalues >1 and item-total correlations of at least 0.30 or higher (all criteria seem very appropriate and justified with citations). Some items were missing factor loadings which make it more difficult to determine whether other items were comparable candidates.

A final confirmatory factor analysis was conducted on another sample of 427 adult users—again it was not stated what this sample did in addition to responding to the 15 items. In the questionnaire, items are preceded with a 'The Website', implying that participants were responding to a particular website or websites. Some clarification here would help.

The final questionnaire has four factors with associated internal reliability (coefficient alpha).

(1) Customer centeredness ($a = 0.92$)
(2) Transaction reliability ($a = 0.80$)
(3) Problem-solving ability (0.77)
(4) Ease of navigation (0.61)

Nunnally (1978) recommends a lower bound of coefficient alpha of 0.7, suggesting that ease of navigation shows low internal reliability and some caution should be used in interpretation. This alone is not a reason to exclude it as similar low loadings have been reported for SUMI factors, I consider it a tentative factor given the modest internal reliability.

In general, I found the approach that the authors took to be reasonable. What constitutes a good website? Well, why don't we ask people who should know: experienced internet shoppers, folks who know about scale construction and see what the literature has to say. The biggest methodological drawback of the paper was the absence of any measure of sensitivity. Do these items really discriminate between websites with high/low levels of customer centeredness, transaction reliability, problem solving and ease of navigation?

I would have suggested the students and adult samples to rate specific websites that the experts determined were poor and excellent and see how well the items identified them. This would provide a reasonable measure of sensitivity for each of the factors. Apart from that methodological question, the customer-centeredness factor seems to dominate this instrument, containing one-third of the 15 items. Customer-centered thinking is a recent hot topic, much like customer loyalty; however, in this case, the items touch upon call center satisfaction. While there are certainly websites and software applications that rely on call centers, it seems to be misplaced or antiquated. What makes eBay, Craigslist, Netflix, Amazon and Zappos excellent websites: Courteous call Centers, Prompt inquiry? Perhaps, but I suspect that it has to do more with NOT having to engage a call center to browse and purchase items.

In conclusion, I think that both the large literature review and the approach provide a good template to others creating scales for measuring website satisfaction. I am less convinced that the items retained in this scale are the best measures of website satisfaction. They do provide value in many contexts, but seem less relevant to popular self-service websites where there is little interaction with customer support. Future research, including a sensitivity analysis between poor- and high-performing websites, would help provide more evidence that these really are the best items for measuring website satisfaction.

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