Web design guidelines: Investigating issues of interpretation and efficacy

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Abstract

This poster describes research issues specific to web design: guideline understanding and interpretation by designers. Designers assess ten cancer information websites using an abbreviated version of the 2006 US Department of Health and Human Services guideline set.

Following this individual assessment, the designers are paired to discuss their evaluations and attempt to reach consensus. Then all the participant designers meet to discuss those guidelines for which consensus has not been reached. The discussions are intended to draw out issues around the understanding and interpretation of the guidelines. The research will lead to improved guideline presentation.

Research Question

Is there agreement among web interface designers regarding the interpretation of evidence-based web design guidelines?

Background

The development of web based interfaces to support information access and collaboration is a complex endeavour for interface designers. Design guidelines represent a means to codify both the experience of communities of practice and findings from published research. Good design is difficult, but guidelines may offer a means to positively influence the effectiveness of an interface.

Literature considering web interface design guidelines has:

- reported problems with how the guidelines are understood and applied by those involved in the design process
  (Kabir, 2008; Ivory & Megraw, 2005; Ivory, Sinha & Hearst, 2001; Vanderdonckt et al., 2000)

- evaluated tools that would better facilitate this process
  (Sutcliffe, Kurniawan & Shin 2005; Beier & Vaughan, 2003; Henninger, Lu & Faith, 1997)

Kabir (2008) considered the use of web accessibility guidelines and noted problems related to guideline implementation are due in part to variations in the understanding and application of guidelines by designers, a finding that suggested the need for further study.

Preliminary Results

At this point, six of eight designers have completed assessments and three sessions with paired designers are completed. Initial results show a wide range of opinion on web site compliance to the 68 guidelines. Designers' assessments differ by as much as 35 percentage points (medicinenet.com) and are never closer than 11 percentage points (cancer.ca). When comparing agreement rates in pairs, the agreement rate for designers was at best 85% (in the case of cancer.ca) and in one instance less than 50% (in the case of medhelp.org). But following paired discussions, the designers resolved differences in all three cases. Early analysis of conversation transcripts shows that designer collaboration led to changes in guideline interpretation and to relatively quick resolution of disagreements.

68 guidelines from *Research Based Web Design & Usability Guidelines* (2006) with **moderate** to **strong** research support

Guidelines

Web sites

Top **ten** cancer information web sites visited by Canadians in **December, 2007** (measured as total monthly unique visitors by www.comscore.com)

Individual Assessments

Designers are asked to assess compliance of web sites to guidelines

Guideline compliance by site, showing minimum and maximum compliance*:

About.com	39-71%
Cancer.ca	69-80%
Cancer.gov	59-77%
Everydayhealth.com	54-78%
iVillagehealth.com	60-76%
mayoclinic.com	68-89%
medhelp.org	42-75%
medicinenet.com	48-83%
netdoctor.co.uk	51-81%
revolutionhealth.com	64-77%

* For example, for About.com Designer 1 assessed the site to comply with 39% of the guidelines, Designer 2 = 41%, Designer 3 = 57%, Designer 4 = 71%, Designer 5 = 61%, Designer 6 = 52%.

Paired Assessments

Designers are then paired to discuss assessments and reach consensus.

Designer agreement by site *before* discussion*:

About.com	60-69%
Cancer.ca	62-82%
Cancer.gov	62-68%
Everydayhealth.com	65-69%
iVillagehealth.com	59-71%
mayoclinic.com	63-85%
medhelp.org	49-63%
medicinenet.com	59-62%
netdoctor.co.uk	59-78%
revolutionhealth.com	60-71%

* Figures show the rate of agreement between individual assessments prior to the paired designers discussing guidelines.

Group Assessments

Will take place November, 2008

Next Steps

Once all individual assessments are completed and pairs of designers have reached consensus, the eight designers will be asked to meet as a group to discuss guideline assessments on which there is disagreement. The goals are (i) to achieve an assessment of all 10 web sites agreed upon by eight designers, and (ii) to identify problematic guidelines. The research will ideally lead to improved guideline presentation. Improved guidelines will better assist designers in understanding and applying existing expert opinion and/or research-based evidence.

The data from this study will be used in a subsequent study where performance measures gathered from participants interacting with the web sites will be compared to the assessments.

References

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