Web Site Evaluation: Participants' Perceptions of Sites

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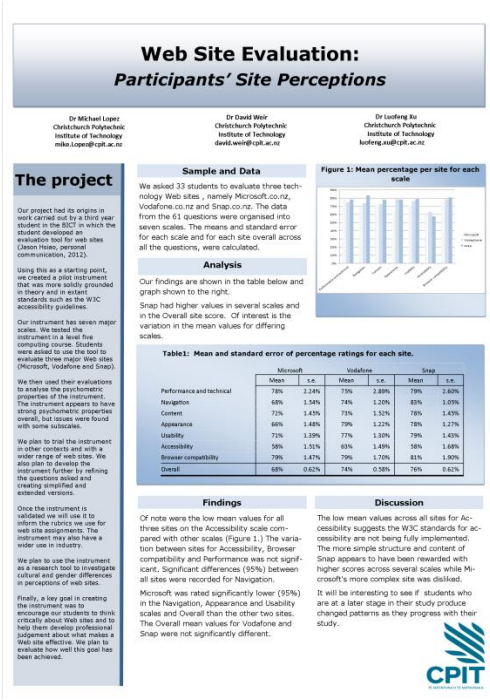
ABSTRACT
In this poster paper, we present participants' perceptions of three web sites collected as part of a trial of a new instrument for Web Site Evaluation. The instrument is a questionnaire with 61 questions organised in seven scales. The instrument was trialled with 33 level five computing students. We report means and standard errors of all scales. Participants gave low ratings for accessibility to all three sites, suggesting that the W3C standards for accessibility are not being fully implemented.

Categories and Subject Descriptors
K.3.2 [**Computers and Education]**: Computer and Information Science Education

General Terms
Measurement, Performance.

Keywords
Web site evaluation, technology acceptance.



1. INTRODUCTION
Our project had its origins in work carried out by a third year computing student in which the student developed an evaluation tool for web sites [Jason Hsiao, personal communication, 2012]. Using this as a starting point, we created a pilot instrument that was more solidly grounded in theory and in extant standards such as the W3C accessibility guidelines. Our instrument has seven major scales.

We tested the instrument in a level five course in a three year computing degree. Students were asked to use the tool to evaluate three major Web sites (Microsoft, Vodafone and Snap).

We then used their evaluations to analyse the psychometric properties of the instrument. The instrument appears to have strong psychometric properties overall, but issues were found with some subscales. We plan to trial the instrument in other contexts and with a wider range of web sites. We also plan to develop the instrument further by refining the questions asked and creating simplified and extended versions.

Once the instrument is validated we will use it to inform the rubrics we use for web site assignments. The instrument may also have a wider use in industry. We plan to use the instrument as a research tool to investigate cultural and gender differences in perceptions of web sites. Finally, a key goal in creating the instrument was to encourage our students to think critically about Web sites and to help them develop professional judgement about what makes a Web site effective. We plan to evaluate how well this goal has been achieved.

There are several parts to this project. This poster describes the participants' perceptions of the web sites.

2. SAMPLE AND DATA
We asked 33 students to evaluate three technology Web sites, namely Microsoft.co.nz, Vodafone.co.nz and Snap.co.nz. The data from the 61 questions were organised into seven scales. Responses were on a five-point Likert scale. These are reported in this poster as percentages, with 100% representing strongly agree and 0% representing strongly disagree.

The means and standard error for each scale and for each site overall across all the questions, were calculated.

3. ANALYSIS
Our findings are shown in Table 1 and graphically in Figure 1.

Snap had higher values in several scales and in the Overall site score. Of interest is the variation in the mean values for differing scales.

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4. FINDINGS

Of note were the low mean values for all three sites on the Accessibility scale compared with other scales (Figure 1.) The variation between sites for Accessibility, Browser compatibility and Performance was not significant. Significant differences ($p<.05$) between all sites were recorded for Navigation.

Microsoft was rated significantly lower in the Navigation, Appearance and Usability scales and Overall than the other two sites ($p<.05$). The Overall mean values for Vodafone and Snap were not significantly different.

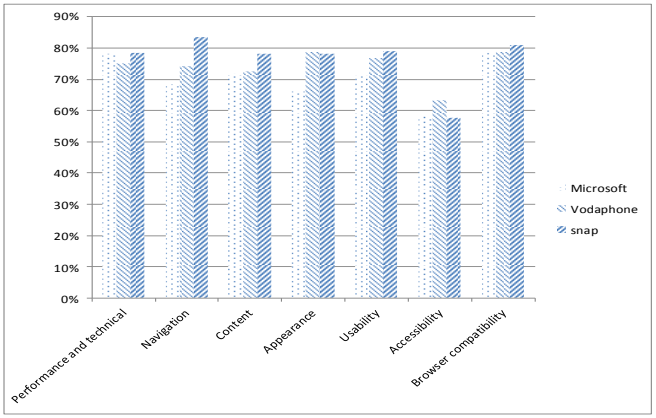

Figure 1: Mean percentage per site for each scale

5. DISCUSSION

The low mean values across all sites for Accessibility suggests the W3C standards for accessibility are not being fully implemented. The more simple structure and content of Snap appears to have been rewarded with higher scores across several scales while Microsoft's more complex site was disliked.

It will be interesting to see if students who are at a later stage in their study produce changed patterns as they progress with their study.

Table 1: Mean and standard error of percentage ratings for each site.

	Microsoft		Vodafone		Snap	
	Mean	*s.e.*	*Mean*	*s.e.*	*Mean*	*s.e.*
Performance & technical	78%	2.24%	75%	2.89%	79%	2.60%
Navigation	68%	1.54%	74%	1.20%	83%	1.05%
Content	72%	1.45%	73%	1.52%	78%	1.45%
Appearance	66%	1.48%	79%	1.22%	78%	1.27%
Usability	71%	1.39%	77%	1.30%	79%	1.43%
Accessibility	58%	1.51%	63%	1.49%	58%	1.68%
Browser compatibility	79%	1.47%	79%	1.70%	81%	1.90%
Overall	68%	0.62%	74%	0.58%	76%	0.62%