

A Comparison of Business Owner and User Evaluations of Web Sites

Julie Fisher
Annemieke Craig
John Bentley

School of Information Systems
Victoria University
Melbourne, Australia
Email: Julie.Fisher@vu.edu.au

Abstract

The web, when used effectively, can be a powerful marketing and sales tool. Electronic commerce systems have the potential to reach a much larger audience than the traditional shop front. Business owners however, need to understand the importance of the design of web sites. The cost of developing an effective web site can be considerable yet many small businesses create web sites without understanding their target audience. Recent research suggests that often designers of web sites are unaware of their audiences' needs and preferences and this has an impact on the use of the site.

Keywords

usability, web design, usability evaluation, user satisfaction, small business

INTRODUCTION

The literature on e-commerce and web site design covers a range of issues; many are similar to those issues that relate to the design of any system. However, there are other issues in particular designing for a broad and in many cases, an unknown audience that are specific to designing web sites. This paper discusses the results of a study that examined how small business owners approached web site design and compares this with user reactions to those sites. The study found that small business owners gave little thought to their target audience and frequently were not asked for their input from the site developers. Whilst the owners of the sites were generally satisfied with the outcome, the users were not. The research indicates that the approach small business owners are taking to getting a web presence needs to be re-thought, as in many cases the sites are not meeting the needs of the audience.

IMPORTANCE OF WEB SITE DESIGN

Reynolds (1997) provides two key reasons why many small business owners decide to go online; the apparent low cost involved in launching a web site and concern that if they don't, they will be left behind. For many small business owners the approach taken to launching their business online appears to be to design the sites themselves or to employ a web site designer with decision making left to them. Web site effectiveness however will depend on the designer's understanding of the key design issues. If designers are unaware of what constitutes effective e-commerce / web sites, businesses are unlikely to reap the anticipated benefits. The literature proposes a number of reasons why good design is important:

- Users are likely to visit the site again if they have had a good experience the first time and have found the information they want (Salam et al. 1998).

- Users will be more likely to make a transaction if the design is effective (Tilson et al. 1998; White & Manning 1998).
- More successful transactions are completed (Tilson et al. 1998; White & Manning 1998).
- White and Manning (1998) found that users' reactions to a web site had a direct impact on whether they were prepared to purchase goods from that site.
- Users will make more use of the site and more information will be distributed, if it is easily navigated (Silker & Gurak 1996).
- Users are more satisfied. "Web sites which are developed using human factors input do actually produce higher user satisfaction levels than sites which, however well crafted technically, have not benefited from this kind of input." (Kirakowski et al. 1998)

Web site design issues

There are a number of key issues that are frequently raised in the literature in relation to effective web site design. The primary ones are:

- *The information content* of web sites is very important for users. Research conducted by Abels et al. (1998) found "if the content requirements are not met, users will not use a Web site." (Abels et al. 1998, p42). The quality of the information was also found to be important, users want useful information that is accurate. How the information is displayed and accessed is also significant for users and strongly influences their perceptions of usefulness of the site (Bruce 1999; Nielsen 1999).
- *Understanding the audience* is critical (Reynolds 1997; Nel 1999; Abels et al. 1998). Reynolds suggests that businesses need to invest considerable time and effort in research so they understand their market and can therefore design their site appropriately. Those most likely to buy online are "among the most demanding and sophisticated in their use of conventional retail channels and therefore potentially provide a significant marketing challenge to retailers on the Internet" (Reynolds 1997, p32). Research by Nel et al. (1999), and Berton and Davies (1999) found that where a site provided primarily information there is a greater need to understand the audience, as they are likely to be local users.
- *Visual appeal and the use of graphics*. There has been much written on the use and abuse of graphics on web sites. Research conducted by Murphy (1999) found, not surprisingly, that visual appeal plays a part in a user's interaction with a site. He also found that it is better to allow users to scroll through a site to find information rather than provide clickable links. Nel et al (1999) stress the importance of the user enjoying their interaction with a site. Neilson (1999) however, makes the important point that users today do not visit a site for enjoyment; they are not interested in the visuals per se.
- *Ease of use*: An extensive survey conducted by Bellman et al. (1999) concluded that those consumers who are prepared to buy online are those who are 'time starved'. The implications for designers of sites, they suggest, is that the sites must "make it more convenient to buy standard or repeat-purchase items." (Bellman et al.1999, p38). They also concluded that the process must be easy for the consumer. This is perhaps more important as the number of novice users of the Internet increases.
- *Navigation or flow*, Nel et al. (1999) found that the design of what they term 'flow' of a site will influence how many sales are made from the site. The research also concluded that flow may not be as important for sites that are not selling online. This was also a finding from the research conducted by Ables et al. (1998). Users want the site to have a clear structure and prefer the information broken into small chunks.

RESEARCH

The research reported in this paper was based on a study that investigated how decisions relating to the design of web sites, are made. The first stage of the study identified from the literature, the main elements in the design of web and e-commerce sites that contribute to effectiveness. A theoretical model was developed based on these elements, Table 1.

Design aspect	Design issue
Information	<ul style="list-style-type: none">• Information quality and content (Abels et al. 1998; Salam et al. 1998; Bruce 1999);• Quantity of information (Abels et al. 1998; White & Manning 1998; Bruce 1999);• Accessibility, easy to read (Moeller 1997; Murphy 1999);• Understanding of the audience (Reynolds 1997; Nel 1999).
Display	<ul style="list-style-type: none">• Quality of the display (White & Manning 1998; Murphy 1999);• The design of the text (White & Manning 1998; Nielsen 1999);• The colours and graphics presented (Abels et al. 1998; White & Manning 1998; Murphy 1999; Nielsen 1999; Simeon 1999).
Ease of use	<ul style="list-style-type: none">• Usability of the site (Hackos and Redish 1998, 433);• Quality and effectiveness of links (Moeller 1997; Abels et al. 1998);• Ease of navigation (Silker, 1996; Nel, 1999; Abels, 1998);• Ability to complete the task effectively (Silker & Gurak 1996; Tilson et al. 1998; Bellman et al.1999);• Time taken to complete task, down load time (Bellman et al. 1999).

Table 1: Key elements in effective web design

Owner interviews

Ten business web sites located in the western suburbs of Melbourne, where the university is based, were selected for this small scale study. These were selected on size and location. Businesses with less than ten employees were selected to ensure that the person interviewed was the owner and decision maker. Interviews were conducted with seven small business owners, the other three either could not be contacted or were not willing to participate. The questions for site owners related to their involvement in the development of the site, their impression of the site and its purpose. Details of the questions can be found in Appendix 1.

User interviews

Fourteen users participated in evaluating the sites, all were tertiary students of varying ages. Three users indicated they had limited Internet experience, the rest were confident users. The users were provided with a scenario and asked to complete a series of tasks for each site after which they completed a questionnaire, which explored their experience and views of that site before beginning the tasks for the next site. Each user explored and commented on four of the sites and seven users tested each site. This is in line with usability testing where it is suggested that between five and eight users will generate useful results (Nielsen, 1993 pg 156). The researchers observed and made notes during the usability test. A description of each site and the set tasks is provided in Table 2. Only two sites (Sites 5 and 8) had the facility to purchase on line.

Site	Description of site	Task set
1. Reception Centre 1	The site contained primarily detailed information and pictures on the mansion's history (the location of the reception centre) with little additional information. The site contained one long page.	Investigate booking a birthday party.
2. Bicycle shop	Advertised bicycles, bicycle parts and repairs. There were several pages and links on the site.	Investigate purchasing a bike and organise repairs.
3. Florist	The site displayed pictures of various floral arrangements for different occasions and was arranged according to the different occasions.	Investigate purchasing flowers.
4. Motel	Pictures of the rooms of the motel were displayed with information relating to facilities and location.	Investigate booking a room.
5. Disabled aids (online)	This was an e-commerce site offering a range of products for the disabled from gifts to disabled aids.	Buy a gift for a disabled child.
6. Jewellers	A regionally based jewellers shop, the pages had pictures of watches and jewellery with some descriptions. The site also provided information relating to gem stones.	Investigate purchasing a watch.
7. Reception Centre 2	Most of this site consisted of pictures of the reception rooms. The site had only three pages.	Investigate booking a birthday party.
8. Green groceries (online)	This was also an e-commerce site offering online green groceries. Users were able to select a range of fresh food products from a range of categories.	Buy potatoes and apples.

Table 2: Web sites investigated

Method

A heuristic approach to the usability test was taken. "The term heuristic evaluation describes a method in which a small set of evaluators examine a user interface and look for problems that violate some of the general principles of good user interface design." (Dumas and Redish, 1994 p65). The research investigated the usability of sites, in particular, information, the display and ease of use. The research did not examine issues such as trust or willingness to purchase online. For this research, a theoretical model describing the general principles of web sites was developed (Table 1) and the questions put to users and developers were based on this model. Restrictions on paper length prevent a full description of the questions asked. Appendix 1 however provides examples of the key questions asked of both groups and the response options. The questions for both the users and the owners were qualitative and quantitative in design, requiring some free text or verbal response, Likert scale type statements and questions and Yes/No response questions. Where questions and statements were presented to business owners and the users requiring a response on a five-point scale, 1 was rated the lowest score and 5 the highest.

The elements identified in Table 1 were used to categorise the answers given by the users and the owners and entered next to the name of the site they referred to. The qualitative data collected was analysed using a meta matrix as described by Miles and Huberman (1994). Miles and Huberman (1994 p246-253) argue that conclusions that generate meaning (making

and interpreting findings at different levels of inference) can be drawn using a number of techniques. A number of these were used to analyse the data from this research. For example counting the positive and negative comments was undertaken.

The study controls used included the same scenario given to each of the users testing that site. The user questionnaire was the same for all sites. The usability testing took place with all users at the same time in the same room. Sites were evenly allocated to male and female participants. The testing order of sites was designed so no one site was explored by users exclusively either first or last. The tasks were selected based on the owners' expectations of what they believed could be accomplished through their sites. The tasks were designed to be gender neutral, for example, the task for the Jewellery site was to investigate purchasing a watch, rather than an item of jewellery as this could appeal more to women than men.

RESULTS

The data analysis is presented under the three key design elements identified in Table 1. The sites are referenced according to the numbers in Table 2. The qualitative data collected is used to illustrate or explain the user's responses to the different web sites and to highlight further what was important to them and why.

Reasons for establishing a web site

The primary aim for developing the web sites for all of the seven business owners was to advertise their business and to develop new clients. It was important to *'put [them]selves out into the world'*. A number of the owners commented that this was a cheaper form of advertising; *'cheaper than sending a direct mail catalogue'*, and another suggested that they could *'reach a different, broader market. We can reach them without using manpower'*.

Rating of web sites

The owners were asked to rate how successful, from a business perspective, their site had been. Three owners rated their sites as being very successful as one owner said *'because of the business it has attracted since it was set up'*. The other four owners had not yet formed a conclusion as to whether their site was successful or not.

Users were asked 'How would you describe your feelings generally about your experience using this site?' The options were Very interested, Interested, Indifferent, Bored, Very bored. The average response from users on all but one site was above indifferent. The only site users on average rated as 'Bored' was Site 3.

Information

Information was assessed according to the quality and quantity of the actual information provided, and how easy the users were able to read the information. It was anticipated by all of the owners that their sites would attract a mature audience, with none of the sites catering for young teenagers or children. All owners said the information on the site was described in language sites that was easy for their target audience to understand. Being able to readily update the information provided on the site was a significant factor for one owner as he was *'able to keep information up to date [and make adjustments] for any changes in price'*. Two owners acknowledged the importance and value of keeping information up to date but they did not do this regularly. However another had not even considered the issue of the timeliness of the information provided on his site with no one responsible for updating the information.

Only one of the owners believed that there was enough information provided to his clients via the web site. Most of the owners felt that their sites *'probably needed a little bit more'* information. The owner of one site was constrained by his provider as they *'were inflexible'*

as to the number of words' he could display. The owner of one of the reception businesses, Site 1, had deliberately given few details on his site because 'we like people to come and have a look and talk to us'. The researchers observed that this was not obvious from the site.

Users were asked two questions and presented with statements to assess the quality, quantity, accessibility and the extent to which the information met their needs. Table 3 presents the users' responses to these two questions. Both questions required either a Yes or No answer.

Question		1	2	3	4	5	6	7	8
Did the site provide all the information you required to complete the set task?	Yes	2	4	1	2	5	7	4	6
	No	5	3	6	5	2	0	3	1
Was there anything else you wanted to know but could not find from the site?	Yes	3	3	5	6	0	5	5	3
	No	4	4	2	1	7	2	2	4

Table 3: User responses to information quality

Sites 1, 3 and 4 had insufficient information to meet the needs of the users in terms of the information supplied. The lack of relevant information on these three sites caused a high level of user frustration. As one user said of Site 1, *'The worst feature - too wordy about the history, not enough about booking the establishment.'* The users complained that Sites 1 and 4 did not give them information on things such as the size of a booking or the cost or the type of functions they catered for. The owner of Site 1 specifically mentioned that he did not want to include more information because he wanted potential customers to call, however the reaction of users to the information on the site suggests that this may not have been the right approach, that he did not really understand the needs of the audience.

The users were very positive about the information provided on Site 5, examples of the comments they made were:

'The best feature was it was easy to read, all further references are easy to see and have large areas to click on.'

'The information was very effective, everything was listed one beside the other (large placements) had an order form with email address on bottom of screen that allowed you to send your order easily'.

Of Site 8 one user commented:

'Best feature of the Site was the information brief and easy to read it was very effective and well thought out'.

How much of the site users were prepared to read is an important measure of the value of the information to the users. Table 4 presents the scores of the users averaged on the amount of information read from each site.

Question	1	2	3	4	5	6	7	8
How much of the information on the site did you actually read?	3.28	4.14	4.00	3.42	3.00	4.28	4.00	3.57
The language used was easy to understand	3.57	4.00	3.85	3.85	4.28	3.85	4.14	4.00

Total (equal weight for each question)	6.85	8.14	7.85	7.27	7.28	8.13	8.14	7.57
--	------	------	------	------	------	------	------	------

Table 4: Averaged user responses to information read

Site 6 was the site most read by the users and Site 5 the least read, although the users did agree that the language used on all the sites was easy to understand.

Display

The quality of the display included the quality of the graphics, the colours and design of the visual elements of the text and the site in general. Six of the owners agreed, or strongly agreed, that the design of the interface on their sites was very appealing while one owner was undecided. All agreed that the graphics on their sites were appealing. The following are typical of the responses the owners gave to the issue of the visual display of their sites:

'It is different to other photographers sites – ours is creative.'

'Its eye appealing, with the watches and jewellery.'

'The visual photos attract people.'

'We have looked at other mountain bike sites. [Ours] is a fair bit different, it is more interactive as there are a lot of movable things on there.'

The quality of the design was rated by the owners on a scale of 1 to 10 with 1 being poor design and 10 excellent. The jewellery store owner, Site 6, said that his site was *'better than average, rating 6.5'* Another owner rated their site 6.5, two rated 7 (Sites 5 and 7), one at 7.5 (Site 2) and one at 5 (Site 1).

Users were presented with four statements that related to the quality of the display. The average rating given by the users to each of the statements is presented in Table 5. The total is the total averaged score of the site given by users for those four statements.

Question	1	2	3	4	5	6	7	8
I found the design of the interface very appealing	3.43	4.29	3.14	3.43	3.57	2.29	3.43	3.29
Generally the size of the text was easy to read	3.86	4.57	4.14	3.29	4.57	4.00	4.00	4.14
Generally the text web site displayed in a way that was easy to read	3.71	4.43	4.00	3.50	4.43	3.00	3.86	4.14
Generally I found the graphics on the site appealing	4.14	4.14	3.71	3.14	3.00	3.00	3.43	3.14
Total (equal weight for each question)	15.14	17.43	14.99	13.36	15.57	12.29	14.72	14.71

Table 5: User responses to the visual elements of the sites

The sites the users found most appealing in terms of their display, including the text, were Sites 1, 2, and 5. A number of users commented positively on the photographs on Site 1. The users of Site 2 commented that the colours were good and generally they liked the graphics for example *'I thought the graphics were eye catching.'* The users were very positive about the display of the text on Site 5, with one user commenting *'Large wording well placed, no jargon plain English was used'*.

The sites that users found less visually appealing were Sites 4 and 6. Users were critical of the way the text was displayed on Site 4, with one user remarking: *'The colours made it hard to read and work out what to do.'* Site 6 attracted the most negative comments regarding visual display. The site had a black background with yellow text and all the users objected strongly to this colour scheme. The site also contained spelling mistakes, attracting many negative comments. Typical of the responses was this one: *'Worst feature was the colour of the text. It would have been more effective if the text was readable, the colour of the text was a disgrace the designer should be shot.'*

Generally the users agreed that the graphics on all the sites were appealing. The users were however, critical of the graphics on Site 3 because they found they obscured the text. Two users did not like the animated graphics displayed on Site 2.

Ease of use

Of the design aspects, ease of use is the most important especially the usability of the site. This includes the ability of the user to navigate through the site, ability to complete the task effectively and how long it took.

All owners, apart from, one agreed or agreed strongly that their site was easy to use and easy to navigate through.

Two statements were put to the users. The statements and the averaged responses of the users are presented in Table 6.

Question	1	2	3	4	5	6	7	8
It was easy to navigate through the site	3.86	4.29	3.86	3.71	4.14	4.00	4.14	3.57
The site was easy to use	4.14	4.14	3.71	3.86	4.14	4.00	4.00	3.57
Total (equal weight for each question)	8.00	8.43	7.57	7.57	8.28	8.00	8.14	7.14

Table 6: Users responses to navigation and ease of use of sites

Related to ease of use is whether the users were able to complete the task. Users were asked if they could complete the task, the results are presented in Table 7.

Question		1	2	3	4	5	6	7	8
Were you able to successfully complete the task?	Yes	2	5	1	3	5	6	5	4
	No	5	2	6	4	2	1	2	3

Table 7: Users ability to complete task

Sites 1, 3, 4 and 8 were judged as flawed in their design in terms of the users ability to complete the task set. The users also rated these sites less easy to navigate. Most of the sites except 3 and 8 were regarded however as easy to use.

Users of Site 1 were unhappy because they could not complete the set task. One user expressed their frustration well saying *'With the writing anywhere it was cat and mouse finding the information.'* Users also considered it unreasonable to have to email for more information, they thought they should be able to book online. It was the owner of Site 1 who wanted to discuss their business directly with the client.

Not being able to purchase online was the major criticism by users for many of the sites. On Site 3, one user said *'There was no way to order flowers. I was frustrated when I was unable*

to find an order form.’ Users also wanted information about prices. A user of Site 4 complained that ‘I could not complete the task, I would have to email them, this is time consuming.’

Site 8, which was the site where users could purchase green groceries online, received complaints from the users that the site was confusing and they found it difficult to work out how to register to be able to purchase.

Summary of positive and negative comments

Another method of assessing user responses is to count the number of negative and positive comments made by the users on each site. A total of 311 comments were made by the users. Table 8 presents the results and the percentages.

Site	Task set	Positive	Negative
1.Reception Centre 1	Investigate a birthday party	18 (42%)	25 (58%)
2. Bicycle	Investigate the purchase of a bike and organise repairs	22 (59.5%)	15 (40.5%)
3. Florist	Investigate buying flowers	14 (34%)	27 (66%)
4. Motel	Investigate booking a room	19 (42%)	26 (58%)
5. Disabled aids	Buy a gift for a disabled child	21 (75%)	7 (25%)
6. Jewellers	Investigate purchasing a watch	14 (31%)	31 (69%)
7. Reception Centre 2	Organise a birthday party	16 (50%)	16 (50%)
8. Green groceries	Buy potatoes and apples	20 (50%)	20 (50%)

Table 8: Positive and negative responses to sites

Sites 2 and 5 attracted a higher percentage of positive comments compared with negative comments. Sites 1, 3, and 6 however attracted more negative than positive comments from users. This is consistent with the user responses to how well users were able to complete the set tasks. Sites 3 and 6 attracted a very high percentage of negative comments.

DISCUSSION

The research results indicate that in this study the small business owners are unlikely to have a clear understanding of the audience they are trying to reach when a web site is developed and this is impacting on the effectiveness of their sites. In summary the users’ responses to the web sites investigated indicate that:

- The quality and quantity of information provided is very important for users. Whilst most of the owners felt their site needed more information this was not always the view of the users. Two of the sites the users indicated, contained too much irrelevant information. This slowed the users down and caused frustration. Users were critical of other sites where not enough information was provided. How the text is organised is also important.
- Users expect to be able to get information such as prices from a web site. Only two of the sites provided pricing information.
- Poor quality visual displays evoked strong negative user reactions. Although the business owners generally thought their sites were attractive there were particular elements of a number of the sites the users did not like. Poorly displayed text was one aspect that attracted a number of negative comments
- Users are less interested in pictures and other decorative graphics than pictures that are relevant to what they are trying to do.

- The users had a strong expectation that if the business had a web site then it should be possible to transact some business through the site.
- Users have an expectation that they will be able to complete tasks easily, this however is often not the case and produces a very negative user response.

CONCLUSION

The number of users involved in the usability test and the fact that very small businesses were used are clear limitations of the study. However the results do indicate that it is an area in need of more research. With the increasing use of the Internet as a marketing and e-commerce tool business owners need to be more aware of the implications of poor design. Understanding the audience and how to design web sites to meet the needs of that audience is an important factor to online success. Despite this, small business owners in particular, are unaware of the impact, positive or negative, that their site has on users. Small business owners would benefit from conducting low cost usability testing using the model to gain design feedback on improving the appeal of their web sites. Greater attention to design and meeting the needs of the audience is needed if business is to reap the rewards the Internet offers.

REFERENCES

- Abels, E., White, M. Hanh, K. (1998) A User-Based Design Process for Web Sites, *Internet Research: Electronic Networking Applications and Policy*, 8(1): 39-48.
- Bellman, S., Lohse, G., Johnson, J. (1999) Predictors of Online Buying Behavior, *Communications of the ACM*, 42(12): 32-38.
- Bruce, H. (1999) Perceptions of the Internet: What people think when they search the Internet for information, *Internet Research: Electronic Networking Applications and Policy*, 9(3): 187-199.
- Dumas, J. and J. Redish (1994). *A Practical Guide to Usability Testing*. Norwood, Ablex Publishing Corporation.
- Hackos, J. and Redish, J. (1998) *User and Task Analysis for Interface Design*, New York, John Wiley and Sons Inc.
- Kirakowski, J., Claridge, N., and Whitehand, R. (1998) Factors and Principles Affecting the Usability of Four E-commerce Sites, *Proceedings of the 4th Conference on Human Factors and the Web*, Basking Ridge, NJ USA, <http://www.research.att.com/conf/hfweb/proceedings/kirakowski/index.html>, published electronically.
- Miles, M. B. and Huberman, M. A. (1994) *Qualitative Data Analysis*, London, Sage.
- Moeller, E. (1997) Designing a Winning (and Usable) Web Site, *Crossroads in Communication, IPCC 97*, Salt Lake City, Utah, USA, IEEE Professional Communication Society.
- Murphy, J. (1999) Surfers and searches: an examination of web-site visitors' clicking behavior, *Cornell Hotel and Restaurant Administration*, 40(2): 84-97.
- Nel, D., van Niekerk, R., Berthon J., Davies, T. (1999) Going with the Flow: Web sites and customer involvement, *Internet Research: Electronic Networking Applications and Policy*, 9(2): 109-116.

- Nielsen, J. (1999) User Interface Directions for the Web, *Communications of the ACM*, 42(1): 65-73.
- Nielsen, J., (1993) *Usability Engineering*, Academic Press Ltd, USA.
- Reynolds, J. (1997) Retailing in computer-mediated environments: electronic commerce across Europe, *International Journal of Retail and Distribution Management*, 25(1): 29-37.
- Salam, A., Rao, H., Pegels C. (1998) Content of Corporate Web Pages as Advertising Media, *Communications of the ACM*, 41(3): 76-77.
- Silker, C. and Gurak, L. (1996) Technical Communication in Cyberspace: Report of a Qualitative Study, *Journal of the Society for Technical Communication*, 43(3): 357-368.
- Simeon, R. (1999) Evaluating domestic and international Web-site strategies, *Internet Research: Electronic Networking Applications and Policy*, 9(4): 297-308.
- Tilson, R., Dong, J, Martin, S., and Kieke E. (1998) Factors and Principles Affecting the Usability of Four E-commerce Sites, *Proceedings of the 4th Conference on Human Factors and the Web*, Basking Ridge, NJ USA, <http://www.research.att.com/conf/hfweb/proceedings/tilson/index.html>, published electronically.
- White, G. and Manning B. (1998) Commercial WWW Site Appeal: How Does it Affect Online Food and Drink Consumers' Purchasing Behavior?, *Internet Research: Electronic Networking Applications and Policy*, <http://www.emerald-library.com/brev/17208ad1.htm>, published electronically.

APPENDIX 1 - Questions – business owners

The following provides examples of questions put to both business owners and users. A complete set of the questions can be obtained from the authors

Demographic questions: size of business, number of employees

Scale questions/statements:

How successful, from a business perspective, would you rate the site? (Very successful, Successful, Neither successful nor unsuccessful, Unsuccessful, Very unsuccessful).

On a scale of 1 to 10 where 1 is very poor design and 10 is excellent design, how would you rate the overall quality of the design of the site?

Please tick the box to indicate the level of input you had on the design of each of the following items on your site. (Twelve items were listed and the business owners were asked to respond on a scale of 1 to 5 where 1 was no input and 5 was high level of input.) The items included: colour of text, background colour, choice of graphics, links, information, font size, number of frames, use of frames.

Please indicate by ticking the boxes below the level to which you agree or disagree with each of the following statements (there were seven statements). Scale of 1 to 5 used – 1 was disagree strongly and 5 was Agree strongly. The statements included:

I think the design of the interface is very appealing or attractive.

The site is easy to use

All the information the user needs is available on the site

The language used is easy to understand

Nominal questions

Who do you believe the audience is for your web site? (Range of ages, income brackets and education were provided.)

If you do have an email address listed on the site, how often would you read and reply to email from the web site? (More than once a day, Daily, Twice a week, Weekly, Monthly)

Open ended questions

What are the aspects of the site that you believe appeal to or attract this audience?

What were your objectives for the site?

Do you monitor the number of people who visit the site? Yes /No If yes, how was the monitoring done and how many people do have visited your site in the last three months?

Who made most of the decisions regarding the design of the user interface?

What do you like most about the site and what do you like least about the site?

Questions – Users

Demographic questions: Age, internet access at home, experience (Very experienced, Some experience, Limited experience, No experience).

Scale questions/statements

How easy was it to navigate through the site and find the information you wanted? (Very Easy, Easy, Neither easy nor difficult, Difficult, Very difficult).

How much of the information on the site did you actually read? (All of it Most of it, About half, Skim read only, None).

How would you describe your feelings generally about your experience using this site? (Very interested, Interested, Indifferent, Bored, Very bored).

Indicate by ticking the appropriate box the level to which you agree or disagree with each of the following statements (eleven statements). Scale was 1 to 5 where 1 was Disagree strongly and 5 was Agree strongly. The statements included:

- I found the design of the interface very appealing or attractive
- Generally the text was displayed in a way that was easy to read
- The site was easy to use
- I found all the information I wanted from the web site

Nominal questions

Who do you believe would be interested in the information on this web site? (age, income, education options provided)

What was the best and worst feature of this site?

Open ended questions

Were you able to successfully complete the task set for this web site? Yes/No. If not why not?

What would make you come back to this site?

Thinking about how the information was laid out on the page, how effective did you find it?

Did the site provide all the information you required to complete the set task?

COPYRIGHT

Julie Fisher, Annemieke Craig, and John Bentley (c) 2000. The authors assign to ACIS and educational and non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.