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Internet Standards: How One State's Small Business Web Sites Compare to Expectations

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Internet Standards: How One State's Small Business Web Sites Compare to Expectations

Abstract

Small business owners are increasingly realizing the importance of establishing an Internet presence. The purpose of the study reported here was to evaluate a sample of Web sites of small and often rural businesses and compare how well the Web sites met a set of 40 standards identified in the literature. In general, the Web sites scored well. The largest area of concern was the lack of variety of ways a customer could order or get assistance. Suggestions are provided as to how this information can be used by Extension educators.

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Introduction

Small business owners are increasingly realizing the importance of establishing an Internet presence. Although an Internet site is no longer considered a panacea or the only marketing channel need by a business owner, a Web presence is recognized by today's small business owner to be part of a complete marketing strategy in order to capture the rapidly growing online market. Even in states such as Oklahoma, where Internet usage has been found to be lower than average (Defining the digital divide, 1999), over 40% of citizens indicated that they had made an online purchase (Barta, 2003).

The Internet can create an opportunity for a small business owner to reach a national and international customer base. An Internet presence can offer enhanced customer service and interactive marketing. A Web site creates new opportunities for small rural enterprises to tap into markets for niche products and services. Yet today's Web customer is increasingly sophisticated and demands that Web sites meet certain standards, such as being appealing, easy to use, quick to download, offering no-hassle returns and exchanges, and providing sufficient product or service information.

The purpose of the study reported here was to evaluate, using content analysis and trained reviewers, a sample of small businesses Web sites from a rural Great Plains state to see how these sites compared to a set of standards developed from a literature review. Of particular interest was how rural sites and sites of food-based businesses, often found in rural areas, compared to urban

and other product and service Web sites. The information found will be useful in helping business owners develop a competitive Web site.

Background

According to the Netdictionary (2003), the Internet is a worldwide network of networks that uses a common communications and addressing protocol. Designed as a medium for the exchange of information, today the Internet has taken on a variety of roles, including becoming a substantial retail market distribution channel with sales of \$69.2 billion estimated for 2004 (U. S. Census, 2005). Through use of the Internet, many barriers to new markets can be reduced or eliminated and the business owner has greater opportunity to develop his or her competitive position (Vlosky, 2000).

Already, most large and medium-size retail companies have a Web presence, using their site to develop customer awareness, provide product information, offer customer service, and, quite often, serve as a distribution channel. Although somewhat slower in adopting this technology, today's small business owner typically has, or is planning to have, a Web site also (Duncan, 2003).

The reasons for having a Web site include developing product or service awareness and providing increased customer service such as a section responding to common questions and e-mail answers to one-of-a-kind questions. Customers are offered tips and techniques on how to use the product as the opportunity for online purchases. Web sites offer the potential to reach large numbers of consumers who want something special, niche marketing opportunities. Examples of such use have been Web sites that allow consumers to find farmers who raise high-quality natural meat produced on environmentally responsible family ranches or the rural craftsman (Hassebrook, 2001).

For a rural state such as Oklahoma, with 90+% of its businesses being small, often less than 10 employees and not located near major population centers, the Internet as a retail outlet has substantial potential (Business Census, 1997; Stanforth, Muske, & Woods, 2003). Yet while an Internet site can have great potential, today's customer is growing increasingly sophisticated, requiring that Web pages contain certain elements before they will spend any time at a site, if they visit it at all (Burke, 2002).

Research on Internet retail sites has found that the successful e-commerce sites today have: ease of use; large selection of products; reasonable prices; no sales pressure; easy payment procedures; fast service and delivery; and detailed, clear product information. These sites offer secure transactions, are easy to read, quick to download, and have tools that assist in site navigation and handle multiple versions of multiple browsers (Duncan, 2003; Mail order the modern way, 1999; Safe shopping online, 2003). Consumers also want to know that their personal and credit card information is safe and that it will not be used for purposes beyond the completion of the business transaction (Grabner-Kraeter, 2002; Humphreys, 2003; Rowley, & Okelberry, 2000).

Yet the development of a successful e-commerce Web site in rural areas can be difficult because many communities still lack high-speed Internet access (Barta, 2003). In addition, the creation of successful Web sites requires access to technical expertise and education (Duncan & Culver, 2000), and citizens must become aware of the possibilities of e-commerce as well as becoming regular users (Beaulieu, 2002; Drabenstott, 1999). Also, as many rural business owners attempt to capitalize on existing resources, this translates into many new businesses attempting to enter the value-added and gourmet food products arena, an area that is highly competitive and one where consumers often prefer to sample the product prior to ordering (Value-added food products, 1999).

Even faced with such challenges, business owners in rural areas and those producing value-added food products are turning to the Web as a marketing channel. The research analyzed how their Web sites compare to a set of standards developed from the literature.

Methodology

Based on a review of the literature, 40 variables were identified as key elements in the development of a Web site that was useable by the market, that clients would return to, and that had some bearing on the success of that Web site. The variables included were those important to the consumer and something the business owner could control. Those variables were divided into four basic categories: overall site evaluation, consumer confidence keys, technical and design considerations, and accessibility. Site questions were either scored on a yes (1) or no (2) scale or on a five-point scale (1=inadequate to 5=excellent).

Next, a list of 72 Oklahoma small businesses, all selling various products through an Internet Web site, was developed. Businesses listed in various online shopping directories were included, as were individual businesses identified by business consultants working with such businesses. Businesses were categorized by location of the company, rural or non-rural, and by business type, food/candy/spice or other. Two reviewers were trained to evaluate the Web sites on all 40 variables. To ensure inter-rater reliability, each reviewer evaluated several common sites. Ratings were then compared, differences in scores were discussed, and a scoring table developed.

Results

Overall, 37 of the 72 businesses were considered rural. Thirty-four of the businesses were food based. In general, the Web sites of the small businesses surveyed rated quite high in the area of overall site evaluation. Only the quality of the content rated less than 4.0, with food sites rating the lowest at 3.47 (Table 1).

Table 1.
Results--Mean Scores and Frequencies
(Significant differences are noted in bold print.)

Variables	Mean or Frequency n = 72	Location Type		Business Type	
		Rural n = 37	Urban n = 35	Food n = 34	Other n = 38
Overall site evaluation					
High quality content	3.63	3.59	3.66	3.47	3.76
Easy to use	4.09	4.00	4.18	3.97	4.19
Minimal download time	4.67	4.50	5.00	4.47	4.67
Updated often	4.65	4.50	4.78	4.40	4.75
Consumer confidence keys					
Fun to navigate	3.85	3.76	3.94	3.65	3.24
Looks professional	3.40	3.38	3.43	4.03	3.55
Product information clear and accurate	4.09	4.03	4.15	4.10	4.08
Offers payment options	4.61	4.47	4.83	4.43	4.76
Easy return/exchanges	4.73	4.43	5.00	5.00	4.67
Quick delivery available	4.88	4.86	4.91	4.82	4.93
Offers customer assistance by: (% Yes)					
Email	33.30%	35.10%	31.40%	29.40%	36.80%
Telephone	52.80%	54.10%	51.40%	55.90%	50.00%
Mail	26.40%	21.60%	31.40%	17.60%	34.20%
Fax	12.50%	16.20%	11.91%	14.70%	10.50%

Can order by: (% Yes)					
Email	13.90%	5.40%	22.90%	2.90%	23.70%
Telephone	12.50%	8.10%	17.10%	5.90%	18.40%
Mail	20.80%	10.80%	31.40%	17.60%	23.70%
On-line	36.10%	48.60%	22.90%	47.10%	26.30%
Provides for secure transactions (% Yes)	49.30%	52.80%	45.70%	51.50%	47.40%
Technical and design consideration					
Good background/text contrast	3.59	3.57	3.62	3.42	3.74
Avoid patterned background	3.97	3.83	4.12	3.94	4.00
Easy to read font	4.18	4.14	4.23	4.09	4.26
Short paragraph	4.09	4.06	4.12	4.23	3.97
Bulleted list	4.16	4.22	4.10	4.27	4.09
Browser compatibility: (% Yes)					
Netscape	59.70%	59.50%	60.00%	70.60%	50.00%
Explorer	68.10%	73.00%	62.90%	58.80%	76.30%
AOL	15.30%	21.60%	8.60%	17.60%	13.20%
Use of frames	18.10%	13.50%	22.90%	11.80%	23.70%
Text only default (at least 1 version)	9.70%	16.20%	2.90%	8.80%	10.50%
Accessibility					
Image and animation	4.18	4.16	4.21	4.14	4.22
Site map (% Yes)	18.10%	21.60%	14.30%	20.60%	15.80%
Skip to main content (% Yes)	92.10%	84.40%	100.00%	89.70%	94.10%

Return to homepage using icon (% Yes)	92.10%	87.50%	96.80%	93.30%	90.90%
One page per screen (% Yes)	26.60%	25.00%	28.10%	35.50%	18.20%
Bold indicates a probability difference of .05 or less between the two categories.					

Among the items found in the area of consumer confidence, the sites evaluated scored lowest, 3.4, in their professional appearance. Sites offered quick delivery (4.88), easy returns (4.73), and a variety of payment options (4.61). While most sites offered customer assistance by telephone (52.8%), only 12.5% offered such assistance by fax. Similarly, 36.8% of the sites had an option for ordering online, but only 12.5% took orders by phone. Only 8.1% of rural sites and only 5.9% of food sites took phone orders. Nearly 50% of the sites did offer secure transactions.

Sites scored quite well in the area of technical and design issues, with the lack of good contrast (3.59) being the lowest rated element. Most of the sites supported the two major browsers, Netscape and Internet Explorer, but only 15.3% supported AOL. Only 9.7% of the sites offered a text-only option for their site.

For the elements considered to be accessibility issues, two useful elements were typically found, "skip to main content" and "return to home." Only 26.6% of the sites showed one page per screen, making it necessary to scroll to see the entire page, and only 18.1% had a site map.

Differences between Web sites, whether by location or by business type, were minimal. Food businesses, as expected, were more likely to be located in the rural areas ($X^2(72,1) = 16.223, p = .000$). Rural businesses were less likely to allow ordering via email or telephone but more likely to allow online ordering ($p = .032, .031, \& .023$, respectively). Food businesses similarly were more likely to use online ordering but less likely to use e-mail or regular mail ($p = .003, .048 \& .047$). Food business Web sites were slightly less fun to use but not significant in that difference ($p = .083$).

Conclusions and Implications

The findings of the study can be helpful to the entrepreneur as he or she develops a Web site. They can also help the Extension educator to guide and direct such an entrepreneur as they look for advice. Overall, the Web sites of these small business owners ranked favorably on the majority of the variables. There were few differences between the Web sites of rural and nonrural businesses or between food and nonfood businesses. The greatest differences found were in the options allowing a customer to ask for assistance or to order.

Although the public is rapidly turning to the Internet as means of communication and shopping, business owners need to remember that many individuals desire to have other means to get customer assistance or to order. Online marketing and sales are just a method; they should be just part of a company's plan to form long-lasting customer relationships. Educators and consultants working with such businesses must remind these owners of such findings. With the growth of the use of the Web as a trade site, it is important that retail Web sites be prepared to handle the variety of customers who may enter the "store." It is important that Extension educators encourage business owners to offer all four methods listed and even more, such as ordering by fax.

The low response rates in other areas, such as being compatible with a wide variety of browsers, limiting the use of frames, having a site map, and having one page per screen load, provide Extension educators with additional information that they can include in existing programs or in new curriculums they are creating. Also, educators must strongly reinforce the idea that today's online consumer is being taught to only do business with secure sites. Only 50% of the sites studied in this survey indicated that their sites were secure to handle financial transactions and personal information.

The Web has always been heralded as one medium where the small business owner can compete on an even basis with big business. While this is potentially true, this can only happen if the small business owner first understands the external market. The Extension educator can help the business person with this task of helping the small business owner recognize the changes occurring or on the horizon. E-commerce is rapidly changing and many of these sites today look much different, based on a random check, than they did two or three years ago.

Several study limitations must be recognized. The first is that the electronic world allows for

creation and maintenance of sites to occur far from the physical location of the business. Thus a Web site classified as "rural" may indeed be designed, developed, and maintained in a large metropolitan area. Also, business owners are quite aware of the challenges in creating and maintaining an effective Web site, and so this becomes one area where they quickly turn for help, meaning that some of the design and development tasks were done by someone else. No attempt was made in this study to determine who had developed these sites or where they were housed and maintained. A third possible limitation was the development of the list from which business Web sites were selected.

For both owners involved in e-commerce and Extension educators working with such owners, effective marketing through e-commerce has one significant caveat. Web sites are only effective if they can be found by the consumer. With the proliferation of Web sites, finding one specific site becomes harder and harder. Successful Web sites will be those that the customer can find. Increasing one's chance of finding a Web site can be enhanced through a variety of methods, including putting it in all printed materials, advertising, becoming identified as an expert in the area, providing handy tips and hints that make people want to return, and affiliate marketing. As with a physical store, there will be no sales if the customer cannot find a site.

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