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What Interactive Web Features are Most Used

Travis Tyler

ttyler@my.harrisburgu.edu

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What Interactive Web Features are Most Used

Travis Tyler

Harrisburg University of Science and Technology

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Professor Sa Liu

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Introduction

The use of interactive features has become commonplace on a majority of the websites people visit. We have come to rely on them to help us communicate and navigate websites that we use every day. It became second nature for people to gravitate towards these features in hopes of getting a desired result on any given website. On some occasions though, users may find themselves struggling to navigate a website that lacks these features or perhaps a site that is overly abundant with complex features. Both situations can cause a user to potentially grow frustrated and leave the site. How can a web designer figure out how to effectively use interactive features without overwhelming a user?

The primary research question of this study is to find what interactive web features users tend to use the most. I also intend to find what situations these features work best in and why that is. The goal of this study is to help designers better understand how to properly design an effective website. The use of interactive features will play a major role in how users perceive a website. By researching how other websites use their interactive features and how people interact with them, web designers will be able to build more effective and professional websites.

Literature Review

The purpose of this review was to find articles researching or related to the topic of interactive media and its use in websites. My goal was to get professional opinions on the effectiveness of interactive features in websites. The plan was to understand how other researchers approach this topic and how they conducted their research. From this I would create a way to collect the data that would best work for my research project. In my research I was able to find three articles relating to my topic.

The first article researched by Amanda Wynn (2008) explores factors of gender, shopping, experience, and how interactive features can affect how consumers shop online. This study split the issue of e-commerce into four categories and reviewed how each one impacts the shopping experience. The information that I found to be the most useful was their research questions relating to interactive web features. I wanted to see how they conducted their research and how it could help me with my own research.

Her findings primarily related to the issues of gender and shopping orientation. She found that apparel products are the primary good being purchased online representing \$28.4 billion in total sales (Wynn, 2008). Additionally, females tend to make the most purchases compared to men, finding that increasing e-commerce's appeal to women would be most beneficial (Wynn, 2008). Some of the issues faced in the research was the ever-changing environment of online shopping at the time. The paper was written in 2008 meaning they were studying a much more barren e-commerce environment than modern day. "The rapid change of e-commerce and the addition of new Websites interactive features may influence consumer behavior intentions." (Wynn, 2008). This unfortunately means their research on interactive features in websites wasn't too substantial.

The following article I reviewed by Deborah S. Chung (2008) researched interactive features and how readers of online newspapers interact and engage with them. In the study, Chung defines interactivity as a relationship between two or more people who mutually adjust their behaviors and actions to each other (Chung, 2008). The study investigates different aspects of interactive features of online newspapers such as, what extent audiences are using different interactive features, and what user attributes are associated with different types of interactive

features. To address these questions the study conducted a web-based survey via online advertisements. They had a sample size of 542 with a completion rate of 77%.

The results of this survey collected several characteristics of the users of online newspapers. They found that 92% of users were white with 60% being female (Chung, 2008). The survey found that medium/human interactive features were the most popular followed closely by medium interactive features. Features that allowed users to directly express their views were used the least. The study concluded that audiences aren't fully utilizing interactive features.

The final article I found by Deborah S. Chung and Seungahn Nah (2009) serves to research the effects of interactive features on users' satisfaction. The article goes into detail about the lack of information relating to the effects of interactivity. They specify that their research target are smaller community-based newspapers since they make up a majority of online newspapers. They define the interactivity as adaptive interactivity or one that allows users to have effects on the sites content (Chung and Nah, 2009). The study examines four interactive news presentations styles; allowing the audience increased options, personalized tailoring, customized options and stories, and interpersonal communication opportunities. The data for this study was gathered during spring of 2008 using a web-based survey throughout the state of Kentucky (Chung and Nah, 2009). Their primary research question was to find the relationship between the use of interactive web features and perceived satisfaction of the community news websites (Chung and Nah, 2009). They also wanted to find if engagement with certain news presentation styles associated with more positive perceptions of a community news website (Chung and Nah, 2009). The two major daily papers they studied were *The Louisville Courier-*

Journal and The Lexington Herald-Leader (Chung and Nah, 2009). Though this survey they wanted to determine a large set of factors including gender, age, ethnicity, and duration of visit.

They found that 51.9% of users were female, with most age demographics falling between 46-55 (27.2%) and 56-65 (23.3%). Most of the users were white making up 99.7% of all users. Users visited the websites an average of 33 minutes per day, 4 times per week. Online audiences were found to use content submission features the most, followed by search features and letter to editor features. Features like Q&As, as well as chat features and web cams, were used the least. Overall, use of interactive features resulted in higher overall satisfaction with the only exceptions being that of Q&A features. As for the secondary research question they found no correlations between presentation style and satisfaction with the audience. In addition, the study found that audiences found that online newspapers were more satisfactory when users could engage more with online web features.

Research Design

When researching my project, I made an overall plan and timeline for each section of my project. The topic of my research was going to be comparing website features. Specifically, websites with interactive features and websites that lacked interactivity. From that, I wanted to find out how sites use interactive features and how users interact with these features. I wanted to get an understanding for the audience I would be addressing with my research as well. Since most of my research was conducted via social media and students at Harrisburg University, I needed to get an understanding of how that audience perceives and uses the internet. From here I decide to look to other research papers to get a better idea of the topic.

Once the semester officially began, I decided to begin researching papers and articles that would help me with my topic. I relied on Google Scholar and the HU database to find the articles I'd be using in my research. Before I selected the articles I would be reviewing, I wanted to narrow down the criteria of articles I would be using. The articles I needed had to cover similar research related to users and how they interact with websites or interactive features, as well as be recently completed to better reflect the modern use of websites. Using their research methods and data collection I wanted to try and emulate how they gather their data so I could hopefully limit the number of variables in my data collection. From the articles I gathered, I found most researchers gather their data through surveys and user activity on websites. From this, I wanted to create my own survey based on my topic.

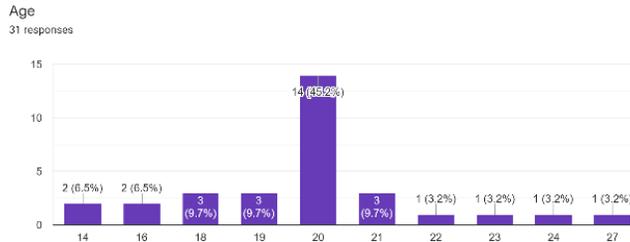
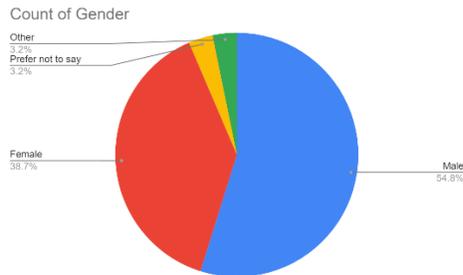
The next part of my research consisted of creating and distributing a survey. I wanted my survey to cover a variety of questions to get a better understanding of my target audience and their web knowledge. Basically, the survey would act more as supportive data to the main research I would be doing later. I started with basic questions about the participants preferred gender and their age to get a range of the demographic I'd be working with. Next, I wanted to get an idea of what they primarily use the internet for by asking about different internet categories these being: entertainment, shopping, education, directions, communications, problem solving, cloud applications, or other. Additionally, I asked what some are of their most visited websites to get an idea of the types of sites they use. After that I got into questions related to common interactive features on websites. I asked how often they use search features, online shopping, web forms/comments, and how often they create an account with a website. I wanted to get a bit more in depth detail with online accounts, so I asked how many accounts for websites have they created. From here, I got into distribution of the survey. To distribute the survey, I primarily

focused on using the social media platform “Discord” to spread it. I would send a link into one of the public chats asking for volunteers. Following the link users would be able to fill out the questions on the survey.

Following this survey, I wanted to create a way to gather data directly from users on how they navigate websites. I developed a scavenger hunt of sorts for participants to complete. When creating the scavenger hunt, I decided to compare how users navigate two different websites, one with interactive features and one without interactive features. I also decided to use three different web topics to get an understanding of what features work best in different scenarios. I narrowed down the topics to shopping, maps, and history. Each one of these fits a different category and offered a different perspective as to the goal of the user and what actions they take to complete them. I ended up with a total of six websites for my scavenger hunt those being, *ABMC World War II a visual history*, *The History Place World War II in Europe*, *USGS The National Map, World Map*, *Walmart*, and *Saubel’s Market*. I then created three tasks participants had to complete for each category of websites. For example, on the shopping websites the participant must find a canned food item on both websites. Participants were allowed to use any tool available on the website as long as they only used that website to complete the task. I also set up the program *Screencast-O-Matic* to record their activity for further review. After completing the scavenger hunt a final survey was presented asking questions on what websites they prefer, what tools they relied on, as well as any other additional comments. While conducting the scavenger hunt, I took note of the participants’ direct reactions to the websites. I got participants for the scavenger hunt by asking for volunteers throughout the university campus.

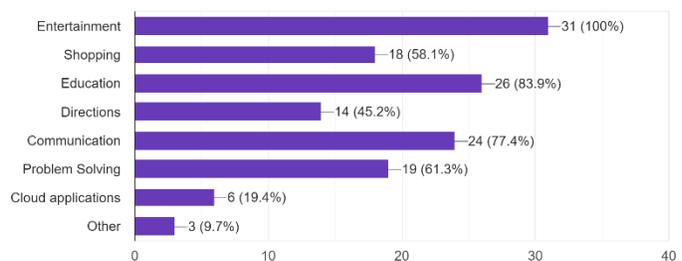
Results

The first result from my primary survey provided information regarding the demographics I would primarily be interacting with through my research. The results for age and gender came back as follows. 54.8% of responses were male, 38.7% of response were female, while other resulted in 3.2%, and those who prefer not to say were also 3.2%. The age range was majority 20-year-old (45.2%), while other ages ranging from 14 to 27 came in between 3.2% and 9.7%.



The next group of questions directly served to address my main research question. The top answers for the primary reason people use the internet came in as predicted. The top choice with 100% of the votes was entertainment, followed by education at 83.9% of users, communication with 77.4%, and problem solving at 61.3%. All responses under the “other” category could be interpreted to fall under the entertainment category, such as responses for gaming or live streaming. The responses for most visited websites came back with a large variety of answers. Some of the most common

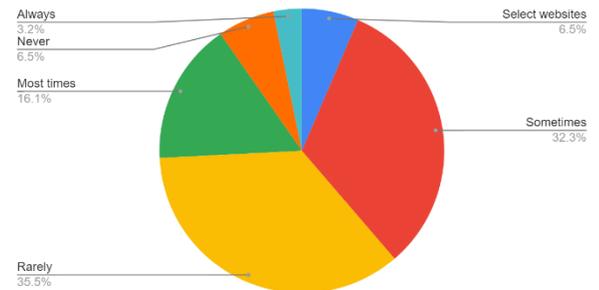
What is your primary reason for using the internet (Select all that apply)
31 responses



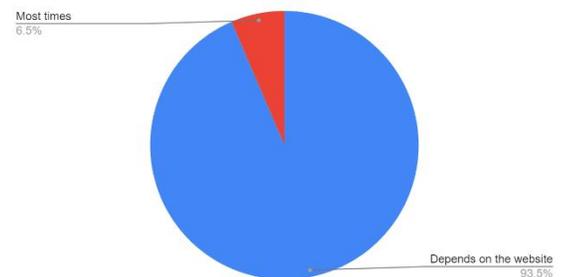
websites listed were YouTube, Amazon, Canvas, and Google, along with social media platforms like Twitch, Instagram, and Facebook.

The next series of questions all related to how often user interact and rely on select interactive features on websites including search features, web forms, and account creation. The first question asking how often users used a search feature came back with 26.7% of users saying they always use them while 36.7% said they use them on most websites, and 30% saying they only use it on select websites. The option of rarely and never each came back with 3.3% responses showing that they are a far outlier in this graph. The next question asked users how often they use web forms or comments on websites. The most common response with 35.5% of responses was rarely, with sometimes following with 32.3%, and most times with 16.1%. The final interactive feature question asked was, how often users create an account with the website when prompted with the option. The results for this question were very one sided. 93.5% of users will create an account on a website depending on what the website is, while only 6.5% of user will create an account most times.

Count of How often do you use/interact with web forms or comments?



Count of When presented the option, do you create an account with a website?



The next source of primary information acquired was through the user recordings from the scavenger hunt. The scavenger hunt was organized into three sections for each topic grocery shopping, maps, and history. Each topic had its own user recordings as well as survey. Each of

the user recordings were analyzed for patterns and trends to find what users prefer to use and what they tend to avoid.

The first topic of maps had a total of five participants. Of the two sites, most users preferred the most interactive website as opposed to the more static website. Most people that preferred the *World Map* site tended to use the find box (ctrl + f) to navigate the site more efficiently. Of those that preferred *USGS* they typically like it more due to the more straightforward nature of the site. One participant who preferred *USGS* was quoted saying “The map was better because I did not have to dig through a confusing website for no reason.” While most users preferred the more interactive site, in this situation (due to the low sample size and small difference in percentage), I could see this work either way for or against interactive features on maps sites.

As for the second topic, results for the history website had a total of five participants. Most participants preferred the less interactive site. This is most likely due to the fact most participants utilized the find box (ctrl + f) to navigate the websites. Most found themselves relying on said tool to properly navigate the sites and find the information they needed. Interestingly while most agreed that *History Place* was easier to navigate in an 80% to 20% difference most agreed that they preferred *ABMC WII* over *History Place*. One participant was quoted that visual in *ABMC WII* were better than *History Place*.

The final category, grocery shopping, had the most conclusive results of the three. Of the five participants in this category all agreed that the more interactive site, *Walmart*, was the easiest to navigate. Additionally, they all said they found themselves relying on search bars to navigate the site. When reviewing the recordings, it became clear that most users would navigate

the *Saubel's Market* site sloppily and confused like they lacked direction. In this section the results are obvious that a more interactive site is better for users' experience.

Analysis

The results of the research showed the use of interactive features primarily depends on the specifics of the website they are used on. The results of the survey showed that in the case of account creation features or comments, these features would only be used rarely, primarily depending on the website they used for. The low use in comments may be due to the specific environment they are used in. Comments on websites are primarily used as a way for users to react to a product or idea. Unless a user is specifically visiting a website to read or leave a comment, it's unlikely, they would be used. This evidence is back up by Deborah Chung's research finding that features that allowed for direct viewer expression were the least used interactive features (2009). As for account creation features, their result is also likely due to their intended use. Most people won't create an account on a site unless they are likely to return. This can be shown in some of the most popular sites listed in the survey. Sites like *Amazon*, *Google*, *Instagram*, and *Facebook* all allow for account creating to potentially build a stronger connection with the user making it likely for them to return. As for the final feature researched, search features on websites were the major outlier in this research. According to the survey they are the most used feature of the three by far. With the user recordings I also found the search bars often used to help find the desired information from a website. The most visited websites from the survey further back this up since nearly every website listed has some form of search feature in it.

The user recordings collected proved themselves to be an excellent way to directly observe how users interact with websites. The topic of websites related to grocery shopping was very conclusive that having a search feature of some kind is integral to keeping users interested and engaged. It was universally voted that a site with a search feature is the better site. It was also observed that users would grow frustrated navigating a site without a search feature. The other website topics were inconclusive with their results. Since the sample size was too low it is difficult to come to a definitive conclusion based on the small difference in percentage.

Observations can still be made from the research, however. The historical site *ABMC* led to the most confusion due to the layout of its sites, but most did enjoy its unique presentation style. It was also made clear regardless of topic or task that a user would typically glance through most pages and leave if information isn't made directly visible. Users would also grow frustrated if they had to revisit a previous page to double check for information. It can be concluded that including tools which make information directly available is important regardless of topic.

Discussion

The research performed ended up leading to some observations that weren't initially intended. When researching what websites to use for the scavenger hunt, it was difficult to find websites lacking in interactive features. This could lead to the conclusion that using interactive features in a website is an overall positive choice in most situations.

With any large research project there are bound to be potential issues or flaws. During my research time, I took note of any issues that could influence my results. As mentioned earlier the low sample size may have influenced the percentage of the results. Using a larger sample size for the scavenger hunt and user recordings would provide more conclusive results. The other issue

with my research was the sample demographic. Most of the data collected was via students attending Harrisburg University of Science and Technology. Since a large population of the students are in their early twenties and are familiar with computers, this may have influenced just how reliant they were on specific interactive tools. The research I was able to perform was limited to the 15 weeklong semester and other responsibilities to other classes. Given the opportunity to research more in depth over a longer period, I would have liked to conduct interviews with professionals working in the web design/development field to get their professional opinion on the matter. Additionally, being able to branch out my sample size to get data from other demographics would have led to more accurate results. Looking back on research I've collected some of it ended up not being used due to lack of relevancy or overly complex results. I initially asked participants in the survey how often they use online shopping since online shopping typically involves the three main interactive features I was researching. I ended up dropping this though since it narrowed down my research considerably and wouldn't directly relate to the information I gathered via the scavenger hunt. Additionally, the survey asked how many online accounts participants would say they had created. I ended up scraping this data since the range of answers was too great to get any reasonable data. Though this research has its flaws, it provides a good basis for understanding how users interact with different features and what situations those features work best in.

I feel that this topic is still open to research and further study. My study took a very broad approach to the topic and unfortunately due to sample size and time limitations I couldn't get the conclusive results I desired. The article research alongside this study was most focused on a specific aspect of this topic. The articles I found focused on interactive features in situations for shopping and ecommerce (Wynn, 2009), how user perceived interactive news presentations

(Chung and Nah, 2009, and interactive features on online news papers predict use from users (Chung, 2008). Deborah Chung and Seungahn Nah further back this up with their own research finding a lack on information related to the effects of interactivity on users (2009). Approaching this topic from a narrower perspective in the future will probably lead to more accurate results. If this methodology is repeated for each situation and topic, a complete understanding of interactive features on websites can be obtained.

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