

**ANALYSIS OF USABILITY AND COST EFFICIENCY OF
TEMPLATED VS CUSTOM WEB DESIGN FOR SMALL BUSINESS**

by

Thomas J. Stouffer

An Applied Project Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Technology

Graduate Supervisory Committee:

Dr. Thomas Schildgen
Deborah Ann Prewitt

ARIZONA STATE UNIVERSITY

Polytechnic Campus

April 2017

ABSTRACT

The versatility of the Internet combined with its ability to disseminate information has caused a rise in user driven content. This has created a powerful alternative to a professionally built sites, the templated website builder. This posed a problem, especially for businesses looking to invest in a website. This study aimed to determined the effectiveness of these two website implementation methods in relation to their respective costs. The research was conducted using two sites for local Arizona companies: Aravaipa Running (Templated Site) and Flip Dunk Sports (Professional Site). To determine site efficacy, two methods were used: A demographic survey that polled potential users and built an average user profile for both sites, and a usability test that rated ease of use based on navigation quality, aesthetics, and user-completed tasks. A detailed costs analysis broke down pricing for implementing each site. Results showed that the average site user is between 21 -30 years old, has some form of higher education, employed full time, has an intermediate level of computer experience, and spends upwards of 20 hours per week using the Internet. Usability test revealed that of the two sites, Aravaipa Running was rated the highest in aesthetics and also showed a high degree of usability. Flip Dunk Sports performed well in navigation, content organization, and website branding. Based on the cost analysis, templated sites were far cheaper to build. The test concluded that professional web designers were more expensive, but built sites with better structure. However it also found that templated sites are a viable alternative and don't result in substantial loss of quality.

TABLE OF CONTENTS

	Page
INTRODUCTION	01
<i>Need for the Project</i>	02
<i>Significance of the Project</i>	03
<i>Statement of the Problem</i>	03
<i>Limitations of the Study</i>	04
REVIEW OF RELATED LITERATURE	05
<i>History of Web Design and the Rise of Templates</i>	05
<i>Understanding Web Usability</i>	06
<i>Optimizing Usability and Design</i>	07
<i>Quantifying Usability Factors</i>	10
<i>Business Web Strategy</i>	12
<i>Cost of Professional Services</i>	15
<i>Summary</i>	21
METHODOLOGY	22
<i>Online Survey</i>	22
<i>Usability Testing</i>	23
<i>Cost Analysis</i>	25
RESULTS	26
<i>Demographic Survey</i>	26
<i>Usability Test</i>	32
<i>Cost Analysis</i>	45
CONCLUSIONS AND RECOMMENDATIONS	49
<i>Conclusions</i>	49
<i>Recommendations</i>	52
REFERENCES	54
APPENDIX	56
<i>A: Demographic Survey Testing Materials</i>	56
<i>B: Usability Testing Materials</i>	62
<i>C: Keevil Usability Test Example</i>	72

INTRODUCTION

The Internet has proved to be a versatile tool that has completely integrated itself into everyday life. It has not only become indispensable for casual users, but for professionals and businesses as well. Websites have become the primary medium for businesses and professionals to sell to, connect and share information with their customers. With the introduction of any new media, the question arises of how to best implement it. Traditionally, web professionals in the field create a standard for best practices after extensive research and experimentation, and these standards are implemented at their discretion. However that is no longer the case. Now, all users regardless of experience and skill have the ability to create a website, meaning new challenges with maintaining usability and design standards.

By its very nature the Internet is a means by which information is disseminated. What was once the privileged information of those with specialized education is now available to all. This has caused a rift to form in implementation methods, split between personal website development and the utilization of professional services. The choice between these two methods is determined by two main factors: investment cost and potential return on investment. Thanks to the introduction of templated website builders constructing a website is no longer dependent on the services of educated professionals. This has the potential to significantly reduce investment costs, a very lucrative prospect to small businesses with limited budgets. Alternatively, a professional designer has substantially more knowledge of web design and usability standards, which translates into a more effective design despite the added investment costs. The question has since become what is the best approach for web development based on available resources and expected results.

Need for the Project

Businesses have a finite amount of resources at their disposal, so choosing how to best allocate them can make or break a company. Businesses make these decisions based on a cost-reward system. The choice to increase costs is based on the potential return on investment the company can expect. With the Internet being such a prevalent force in business operations today it is not an option to forgo having a website, and smaller operations must decide if it is more cost effective to utilize a templated website builder or a web professional.

How do businesses determine what is the right method for them to implement a website? Though the capabilities of templated website builders are substantial and offer significant reductions in cost, there is a noticeable flaw in its use as opposed to utilizing a professional. The ability to create a website does not denote knowledge of its design and structure. The templated website builders have samples to help build sites from, but without informing the users of the significance of different elements. Therefore while sites can be made to look the part, they run the risk of being shallow and lacking deliberate form or substance. Designers are trained to build sites with a larger narrative or goal in mind, while optimizing the design and usability toward that end. However because of the additional education professional designers charge a premium for their services, whether it is on a per-project basis or an hourly rate. It is necessary to conduct this study in order to determine the strengths and weaknesses of each approach as it pertains to cost and returns, as well as aid businesses in making educated decisions on how to best invest their resources so as to maximize the success of their site while minimizing costs.

Significance of the Project

As the demand for web design continues to grow and the line between businesses and professionals continues to blur, the market must re-establish the roles each will play to ensure mutual success. A detailed cost analysis based on the available options, coupled with usability testing will deliver results that will be beneficial to both business and professional alike.

To the businesses, this study serves as a barometer allowing them to better weigh their options and make educated decisions that will most benefit them. With the abundance of resources now available, a lack of understanding of their pros and cons could potentially cause the website to underperform. To professionals, this study serves to educate them on the changes in the market as well as the motivations of businesses with their new found freedom of choice for website implementation. This will help professionals to better market themselves in the future, basing it on their understanding of web design principals and methodology rather than simply on their ability to generate a site.

Statement of the Problem

The objective of this research is to determine the difference in effectiveness between pre-templated and custom built sites, as well as which is more cost effective based on the scale of the business. To accomplish this, the study will analyze two sites, one created utilizing a templated website builder and another created by employing the services of a web professional. The study will include usability testing and demographic surveys to help determine the effectiveness of both the overall design and usability of each site, as well as a cost analysis correlating necessary investment with potential return based on business size and resources. The research will address the following questions:

Research Objectives:

1. What is the basic demographic for businesses utilizing a website?
2. How do the users rate each site's aesthetics/design?
3. How do the users rate the ease of use of performing tasks on the site?
4. What is the difference in cost between a templated website and a professionally built one, both in initial construction as well as maintenance?
5. Based on the cost analysis what is the best method for the business model?
6. What recommendations can be made for each site based on the user tests?

Limitations of the Study

Using a combination of usability testing and cost analysis techniques the study seeks to determine the site efficiency to cost ratio of each site. However there are several limitations to this study. The first is that usability testing is ultimately subjective to the sites being studied, and more specifically the business of each site being studied. Different businesses have different target audiences, which can mean a deviation in results from website to website. The second limitation of the study is time constraints. Due to the limited amount of time available for the study, conclusions will be drawn based on initial observations, rather than observed differences over time. The final limitation is the ability to influence actual changes in the businesses' web approach. This means conclusions drawn will be hypothetical, rather than through observations of actual changes to the site and the subsequent performance.

REVIEW OF RELATED LITERATURE

History of Web Design and the Rise of Templates

To understand web design it is important to understand its roots. Powell defines web design as “A multidisciplinary pursuit pertaining to the planning and production of Web sites, including, but not limited to, technical development, information structure, visual design, and networked delivery” (Powell, 2001, pg. 15). The most important thing to take note of is that web design is multidisciplinary by nature. Though it has its own methodologies unique to that media form, i.e. HTML and CSS, it is not a completely original concept. Instead, web design is an amalgam of different media practices converging after the inception of the Internet to form a new discipline. This means that concepts and methodologies established by other fields are equally applicable to the web. “...No new form has completely eliminated any other. Radio, magazines, newspapers, television, and other entertainment media all continue to exist in some form or other despite emerging technologies and new media forms. The Web certainly isn't so new that we should throw out any valuable concepts we learned before” (Powell, 2001, pg.15). Some basic principles that apply to not just web design but to design disciplines in general are:

- Designer needs versus user needs
- The balance of form and function
- The quality of execution
- The interplay between convention and innovation

(Powell, 2001, pg.15)

“In the abstract sense, these themes are not at all unique to the Web medium. Artists like Leonardo DaVinci certainly struggled at times to balance the desires of patrons and even his viewing public with his own needs. Commercial artists producing something like a magazine advertisement or billboard have to balance the demands of visual look with successful and clear communication” (Powell, 2001, pg. 16).

As the Internet has continued to evolve, it has begun to move toward user-driven content rather than designer driven. For designers, web design is an exercise in controlling both form and content. Web designers are very deliberate when constructing the form of a site. Visual elements like font, colors, imagery, and element placement are all chosen to serve a specific purpose. The new approach of the web has been to split form from content while simultaneously standardizing form (Arola, 2010, pg. 4-6). This split in form and content and the new direction of standardization has given rise to the concept of “templated websites”. Templated sites have simplified one aspect of the site creation process to increase accessibility for users and user-driven content. While this has decreased the barrier to entry for building websites, it has created oversight in the design process. The standardization of form through templated sites has caused the meaningful method of creation by designers to be lost. “I worry that the loss of design production... might lead to less critical consciousness not only about the meaning design conveys but also the ways in which that meaning is enmeshed with the world around us” (Arola, 2010, pg.7-8).

Understanding Web Usability

Proper implementation for web usability requires a basic understanding of what usability on the web entails. According to Krug (2014), usability is “A person of average (or even below average) ability and experience figuring out how to use the thing to accomplish something without it being more trouble than it’s worth” (Introduction, “one last thing, before we begin”). Ultimately web

usability is an exercise in common sense, the overriding principle of which is to not make the user think too hard about how to utilize the site. The web page should be self-evident, obvious, and self-explanatory: “Don’t make me think!” (Krug, 2014, Chapter 1). In Fig. 1 below, Krug helps visualize the concept of conscious thinking when using a website versus not. The image labeled Not Thinking shows a clean site with well-defined sections and clear imagery. Users can quickly identify all the aspects of the site and find what they are looking for. The image labeled Thinking however shows an incredibly busy site, with inconsistent fonts and ill-defined sections, as well as almost no imagery to speak of. Users must consciously think about what is on the page and process it before they can even start using the site.

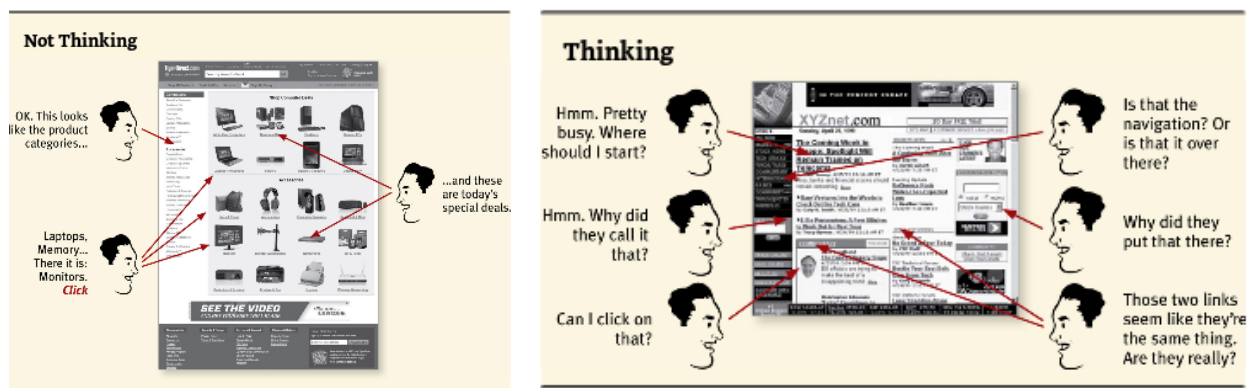


Fig. 1: Not Thinking versus Thinking (Krug, 2014, Chapter 1)

Optimizing Usability and Design

According to Garrett (2011), “Any user experience effort aims to improve efficiency. This basically comes in two key forms: helping people work faster and helping them make fewer mistakes” (Chapter 1, “Good User Experience Is Good Business”). Usability and web design are inherently user-centric. Therefore designers take great care to structure a website from inception to completion with the user in mind. To ensure maximum control over the design process, the website

structure has been divided into 5 stages, or “planes”. The five planes are strategy, scope, structure, skeleton, and surface, and provide a conceptual framework for talking about user experience problems and the tools used to solve them (Garrett, 2011, Chapter 2, “Building From The Top”).

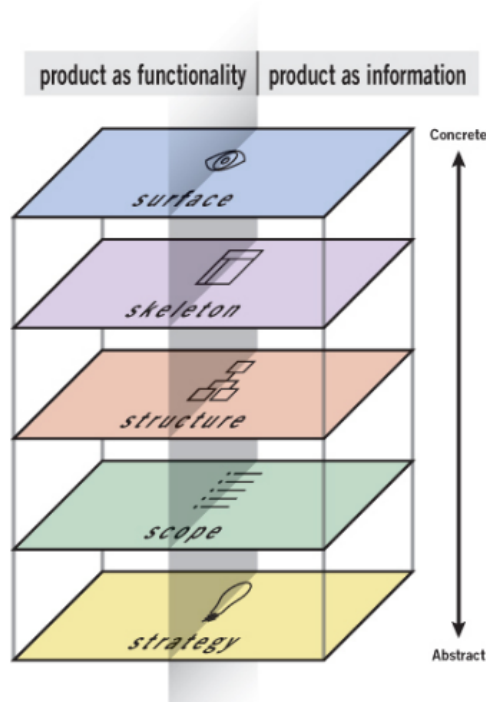


Fig. 2: 5 Planes of Design (Garrett, 2011, Chapter 2)

Strategy Plane – consists of the goals for the site as they pertain to user and shareholder needs

Scope Plane – functional specifications including site features and content requirements

Structure Plane – Defines the system behavior as a result of user interaction with site functionality

Skeleton Plane – Consists of the site’s information design, interface design, and navigation design

Surface Plane – Contains all aesthetic elements as they pertain to the sensory experience of the site

Each plane compounds on the work done on the plane before it. The better the foundation of the site the better the end results will be. Optimization of website performance is not limited to site structure either.

Further optimization can be accomplished through carefully constructed content. According to Odden (2012) "Content is the mechanism for storytelling" (Chapter 1, "Optimize for Experiences"). User experience design focuses on engaging the user and holding their attention. However this cannot be accomplished with visual elements or site features alone. Content should be aware of user needs and expectations and be constructed in a way that delivers a meaningful experience to them. And quality content benefits the site as well, through the utilization of search engine optimization (SEO). SEO is the catalyst that brings users to the site. According to Odden (2012), "Content flows in every direction through a variety of platforms, formats, and devices. The mass adoption of the social and mobile web has facilitated a revolution of information access, sharing, and publishing at a scale never before experienced." In Figure 3 below, Odden highlights the new information cycle and how powerful search engines have become. Sites like Google use algorithms that search site content and HTML for keywords or phrases and construct a site profile that is later used as a matching element when searches are performed. Careful construction of the site and its content can maximize visibility of the site and drive traffic toward it. By considering the content needs across the user life cycle, not just acquisition or conversion, companies can become significantly more effective and efficient in their ability to connect relevant messages and stories with users who are interested" (Odden, 2012, Chapter 1, "Are You Ready to be Optimized?").

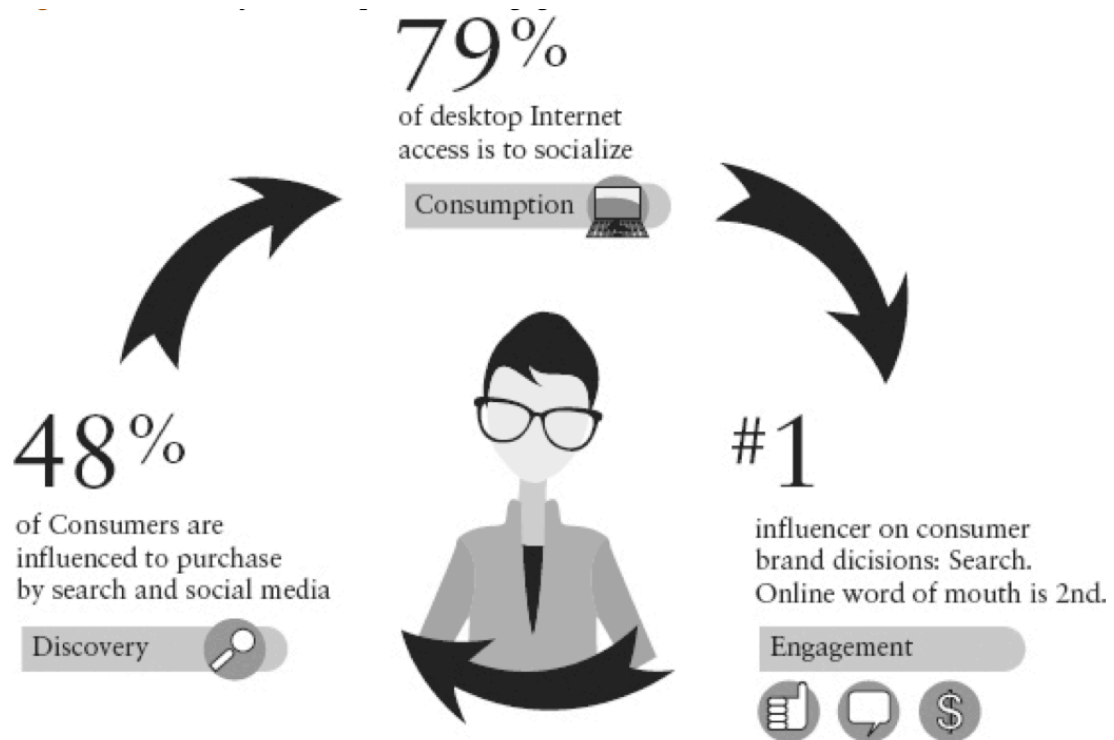


Figure 3: Discovery, Consumption, Engagement Cycle (Odden, 2012, Chapter 1)

Quantifying Usability Factors

Web design is a diverse field of study and improvements to usability can come in a plethora of forms. Identifying those elements is an important step in the process for designers to ensuring quality usability standards. A study performed by Benjamin Keevil used existing methods of measuring usability and a Q&A checklist to establish a “usability index” to quantify the value of a site’s usability (Keevil, 1998, pg. 271). Based on several usability studies, Keevil utilized 5 question categories: Finding the Information, Understanding the Information, Supporting User Tasks, Evaluating Technical Accuracy, and Presenting Information. Then more specific questions were constructed as they pertained to the categories. Each question had a score of 1 for either yes, no or n/a, and after completing the questionnaire the scores are tallied. Total yes answers were multiplied by 100, and then divided by the total number of yes and no answers to create an index score for the

usability of the site (Keevil, 1998, pg. 275). It is important to note that this method assumes an equal weight to all usability factors. For an example of the test created by Keevil, please see Appendix C.

There is also the question of a hierarchy to usability factors and how both users and experts perceive their importance. Studies by research teams have sought to quantify the hierarchy between the different factors. One such team was Dave Gehrke and Efraim Turban, who conducted a study that utilized a two-fold approach to answer this question. First, opinions of experts were aggregated and analyzed to identify factors where the most consensus exists. Then those factors were presented to users and their opinions were analyzed to find those with priority (Gehrke, Efraim, 1999, pg. 1). Their study identified 5 major areas, based on the number of citations in relevant literature (see table 1).

Table 1. Major categories

Category	No. of Citations	%
Page loading	33	19.3
Business content	53	31.0
Navigation efficiency	29	17.0
Security	11	6.4
Marketing/consumer focus	45	26.3

Table 1: Major Usability Factors, sorted by expert citation frequency (Gehkre, Efraim, 1999, pg. 2)

After the initial findings, a large survey of users was taken to identify the relative importance of each category, rated from 1 (very important) to 5 (very unimportant). These results were recorded in table 2 below.

Table 2. Consumer survey results

Category	Average for Groups	%
Page loading	2.37	21.9
Business content	2.16	20.0
Navigation efficiency	2.18	20.1
Security	1.96	18.1
Marketing/consumer focus	2.15	19.9

Table 2: Major Usability Factors, sorted by consumer survey results (Gehkre, Efraim, 1999, pg. 2)

According to the results of this study, page loading speed was considered by users to be the most important factor when deciding on the relative effectiveness of a website, followed closely by navigation efficiency and business content (Gehrke, Efraim, 1999, pg. 2). By quantifying these different attributes into a hierarchy, designers can better address web usability issues in a way that remains the most beneficial toward the user.

Business Web Strategy

Companies operate on a cost-reward structure that predicates all decisions based on a return on investment (ROI). Any costs that the company intends to incur must have a suitable ROI or it will not be factored into the budget. Therefore companies need to be educated on what they are investing in when it comes to web technologies so that they can make informed decisions about options for implementing a website.

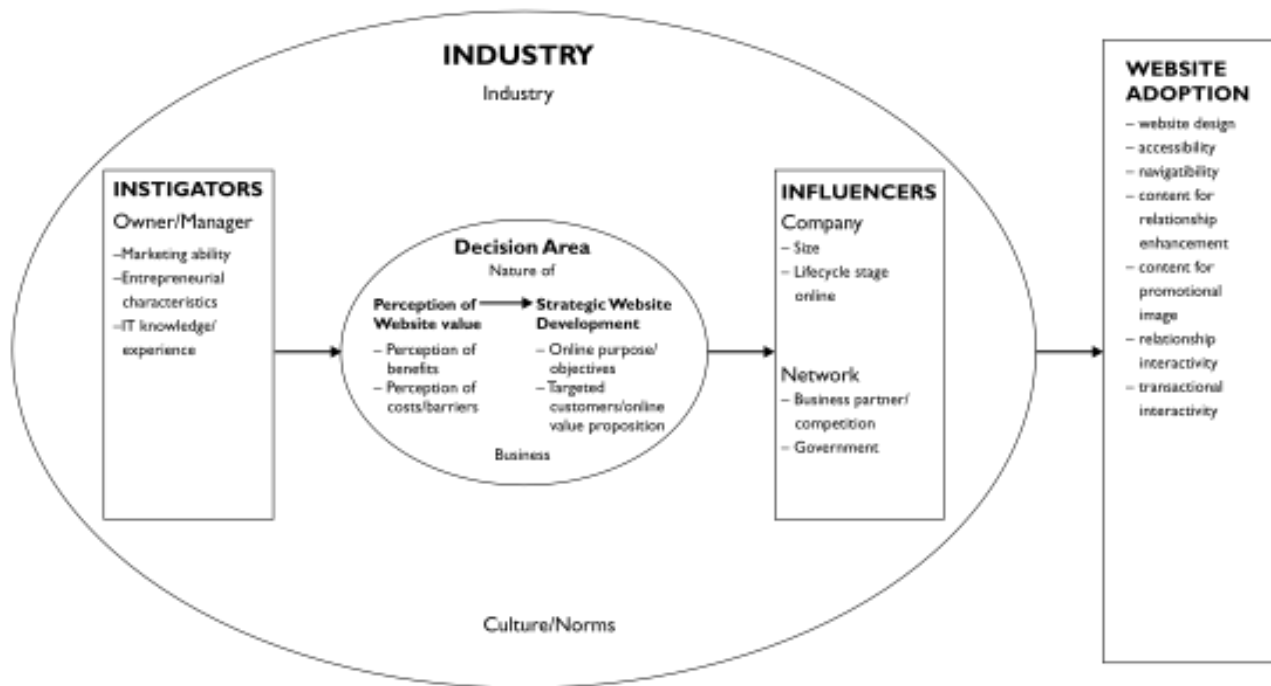


Figure 4: Conceptualization of the Determinants of Small Business Web Adoption
(Simmons, Armstrong, Durkin, 2008, pg. 355)

Figure 4 above (Simmons, Armstrong, Durkin, 2008, pg. 355) offers a comprehensive look at the decision making hierarchy businesses utilize to make decisions, in this case specifically the decision of whether or not to implement a website. Instigators (owner/management, stakeholders, etc...) propose projects, and the decisions are made based on the perception of value those projects can bring the company versus the necessary investment (Perception of benefits, perception of costs/barriers).

One thing of note is that the majority of decisions are sorted under an industry heading. While the company's personal reasons and interests are very important to website adoption, they are ultimately governed by the market they operate in. A study by Ludivine Martin and Thierry Penard from the University of Rennes considered this and proposed two alternative theoretical

frameworks as they applied to business motivations for investing in websites: A resource-based theory and an industrial organization theory (Martin, Penard, 2005, pg. 77).

The resource-based approach states that companies with more resources at their disposal would invest more heavily in web technologies so as to better exploit the business opportunities. The theory is that well-established firms are well placed in their market and have the capabilities to internalize the creation and maintenance of their site, meaning they can better facilitate integrating the website as a new asset. There is also the factor of competition. Firms within higher concentrated markets with stronger entry barriers have less competition, meaning resource allocation is less strict. This also means less uncertainty or consequences in investing in Internet technologies (Martin, Penard, 2005, pg. 78-81).

The second approach, industrial organization, focuses more on market strategy issues rather than internal resource allocation. Unlike the resource based theory, industrial organization focuses on investment strategy as a means of handling competition in the market. This scenario categorizes a website as a strategic investment, in which companies can over or under invest depending on market conditions. The study establishes a typology of innovation using two factors: impact on competitors and impact on consumers; and four types: incremental, major, strategic, and radical innovation. In it, actions taken to affect the firm have a direct correlation to effects on the consumer and their habits (Martin, Penard, 2005, pg. 81-82).

	Enhance the position of incumbent firms	Depreciate the position of incumbent firms
Minor effect on consumer habits	<i>Incremental innovation</i>	<i>Strategic innovation</i>
Major effect on consumer habits	<i>Major innovation</i>	<i>Radical innovation</i>

Table 3: typology of innovation: correlation between firm action and consumer habits (Martin, Pernard, 2005, pg. 81-82)

As shown in Table 1 above, the study concluded that market structure has a direct, contradictory effect on the amount of website investment. Companies within weakly competitive markets were found to invest more heavily in web technologies, whereas those in more competition have an inverse approach (Martin, Penard, 2005, pg. 96)

Cost of Professional Services

The cost of hiring designers is a rather ambiguous question, especially when concerning websites. Unlike selling goods, where pricing is fixed, designers are selling a service which depending on project scope can change from client to client. To determine an accurate estimation of what it would cost to hire a professional designer to work on a website, it is important to understand the methodology behind how they set their prices.

The cost of a project is not something arbitrary that a designer makes up on the spot. Instead, designers estimate. "An estimate is a detailed list of deliverables with information as to how the studio will complete them. This information is then translated into hourly fees for each skill set required to complete the deliverables" (Sherwin, 2012, Managing Your Projects, "Estimating"). It is important to reiterate that this is not guesswork. According to Sherwin (2012), there are 5 steps designers utilize to determine how much a project will cost:

1. Project the number of hours the project will require
2. Set a schedule that accommodates those hours
3. Generate costs for resources, based on hourly rates
4. Select pricing model to match your current business context
5. Translate your detailed estimate into a cost estimate for your client

Using these simple rules, designers can accurately generate detailed cost estimates for a project based on the scope. There are two determinants of price: the hourly rate and the pricing model. Calculating the hourly rate is the first step. Sherwin (2012, Operating Your Studio, "Hourly Rates") breaks down this process into a simple equation:

HOURLY RATE GENERATION

$$\begin{aligned} &\text{Total Labor Cost} \\ &\quad + \text{Total Overhead} \\ &\quad + \text{Total Studio Debt} \\ &\quad + \text{Total Taxes} \\ &= \text{Total Cost} \\ \\ &\text{Total Cost} \times \text{Profit Margin} \\ &= \text{Total Profit} \\ \\ &\text{Total Cost} + \text{Profit} \div \text{Hours per Year} \\ &= \text{Base Hourly Rate (Per Employee)} \end{aligned}$$

Total Overhead – The bare essentials needed to run any service business. Includes: Insurance, Payroll, Office Equipment, Taxes, Software, etc...

Total Studio Debt – Loan debt, consisting of credit or credit cards

Total Taxes – Estimate of the total taxes for the business; local, state, federal and per employee

Profit Margin – Amount of desired profit, calculated against the sum of expenses

Hours per Year – Total number of weeks per year, minus vacation and sick time, multiplied by work hours (i.e., 40hrs./week). Then multiplied by the utilization rate (see below)

Utilization Rate – Rate at which team members are being utilized, minus non-billable activities such as administrative work or marketing. Industry average is 75 – 80 percent (Sherwin, 2012, Operating Your Studio, "Hourly Rates")

By using this formula, designers can accurately determine their hourly rate. The next step is the determination of pricing model that will be used. "The most common pricing models include

charging by the hour, asking for a fixed fee, establishing a retainer agreement or some hybrid of the three” (Sherwin, 2012, Managing Your Projects, “Estimating”).

Fixed fee

Sherwin (2012) defines fixed fee pricing as “an agreed upon price for a set number of deliverables in a proposal.” In this scenario, the designer estimates the number of hours a project will take based on the agreed upon scope, then bills the client for the total amount. With a fixed estimate, the client never sees exactly how many hours were spent on the project.

Pros

- Allows value-based pricing and increased perceived value in the mind of the client
- Allows for an increase in budget from previously delivered projects of a similar type
- Allows overhead costs to be built into the budget, including time spent estimating and planning the proposal
- Potential for larger profit margin
- Allows greater flexibility in pricing
- Requires no budget reporting to client

Cons

- Easy to lose money on a project if it spins out of control
- Requires rigorous adherence to deliverables – no room for “freebies”
- Invites lax internal reporting on the part of staff
- Requires deep estimating experience to “eyeball” a price accurately
- Client delays will force negotiating a change order

When to use

- When competing with other agencies, as this is the standard model for larger projects
- When your project requires more than one skill set or resource: designer, writer, coder, etc
- When you have more than one deliverable
- On any project that requires you paying for vendor-provided services or physical materials; it allows for agency markup on those hard costs
- To educate clients on the value of your agency and your services
- To help grow a client into a retainer-based relationship

(Sherwin, 2012, Managing Your Projects, "Estimating")

Hourly contract

Hourly contracts consist of "billable hourly rate multiplied by the amount of hours required to finish the project" (Sherwin, 2012, Managing your Projects, "Estimating"). Unlike fixed fees, hourly contracts are more flexible and report actual time spent working on the project.

Pros

- Allows for accurate estimating, as you bill for the actual time worked
- Easy to formulate estimates
- Clients understand the model quickly
- Simpler to initiate change-order conversations when hours are exhausted
- Allows client to add hours to fulfill additional tasks
- Good for multiple projects on similar timeline
- Tracking and reporting stems directly from keeping accurate time sheets

Cons

- Require experience when estimating hours associated with new types of deliverables
- Can train clients to see you as a hired hand instead of a long term partner
- Invites bargaining over the number of hours required per project (and your hourly rate!)
- Can lock you into poorly considered rate
- May require on-site work
- Can be cut off more easily mid-contract

When to use

- You are being invited to collaborate with multiple clients on multiple projects
- You are an extension of the agency's or client's in-house team
- Your client can't or won't define deliverables
- The project is open-ended with no deadline
- You're testing the water for a full-time position

(Sherwin, 2012, Managing Your Projects, "Estimating")

Retainer agreement

Retainer agreements are based on receiving a fee for a preset number of hours per a given time frame. Sherwin (2012) defines retainer agreement as "an agreed-upon weekly or monthly bucket of billable hours associated with ongoing needs you fulfill for your client."

The main aspect of retainers is that they are a part of a long-term contract.

Pros

- The retainer can be structured different ways depending on client need
- Guaranteed income: you're paid regardless of whether you complete the hours agreed
- Relationship based on trust
- Shows high value to client
- Can connote an agency-of-record status, meaning that you will be the only company helping your client with a specific set of tasks
- Encourages deep knowledge of client's industry and needs
- Can support hiring the appropriate talent required for the project
- Often associated with large dollar amounts

Cons

- Requires complex and mathematically accurate budget reporting
- The client "owns" your time – all that you agree to provide
- Can create boundary issues regarding when you work and how hard you work
- Can cause inflated expectations for work quality
- Often involves non-compete contracts, limiting you from other opportunities in the same field or market
- Requires expertise in negotiating retainer contracts and master service agreements (MSAs) to hold both parties accountable
- Can impact your company's health if it goes away; downsizing will likely be necessary if revenue is not replaced

When to use

- When you have established a position of trust with your client
- To become an effective extension of the company's business or marketing plan
- To act as a day-to-day consultant affecting company business
- To attain agency-of-record status
- For consistent, sizeable billings
- As a tool to build your agency

- When you client can guarantee long-term work for you but isn't sure of short-term deliverables (e.g., \$500K of business over eighteen months, divided and paid monthly)

(Sherwin, 2012, Managing Your Projects, "Estimating")

On the client side, the most important consideration designers need to make when estimating project cost is budget. According to Sherwin (2012), a budget is a "financial bible for how time and materials will be consumed by your team, and it's derived from your project estimate." By creating accurate estimates and adhering strictly to budgets, designers can ensure their success and the success of the project. "Other than poorly scoping a project, the main reasons that design studios remain unprofitable are improper budgeting and tracking of your team's time (Sherwin, 2012, Managing your Projects, "Budgets").

Summary

Based on the literature review, the defining factors between the implementation methods are knowledge and cost. Designers have an intimate knowledge of the design process and how to properly combine form and content. This especially applies to optimizing site structure and SEO, as well as explicitly quantifying the factors that correspond with Usability. However, because of the increased education professional services can be very expensive. Depending on the pricing model and designer rates costs to utilize a web professional can quickly increase. Cost is one of the most important aspects of a project when businesses are making decisions. The following section will outline methodology to evaluate websites and compare that against the actual costs of both methods.

METHODOLOGY

The main goal of the project was to quantify the costs/rewards of two methods for web design, templated versus professionally built, and determine best practices for implementation based on business size and available resources. The following provides information on the structure of the study, participant selection, and data collection procedures.

Online Survey

The online survey was used to gather potential participants for the subsequent phase of testing as well as collect demographic information to build a sample user base. The participants served as a sample set of the target audience members for both sites being evaluated. Google Forms was used to create and distribute the survey to potential participants, with the test consisting of four sections with a total of 15 questions. The benefit of using Google Forms was it automatically compiled all user results and populated graphics from the data. It also allowed for complete control over distribution, as opposed to purchased survey participants. This is crucial since the following stage of testing required the same batch of participants as the first.

The first section contained a statement explaining the purpose of the survey and instructions on answering questions to ensure response accuracy. It also included a disclaimer that all answers containing personally identifying information will be confidential and only seen by the primary researcher. The following section asked basic demographic information pertaining to the participant, such as age, education, and employment status. The third section asked more subjective questions about Internet browsing habits and expectations for websites, particularly those geared towards businesses. The final section sought consent to use the participant again in the next round

of testing. After submission of the survey the results were compiled with the other participant's results and categorized based on question and frequency of answer across all submitted tests. To view testing materials please reference Appendix A.

Usability Testing

Participants who consented to further testing were given a usability test with two sites as the subject. The test set out to determine site workflow and design efficiency based on actual user input. Participants were shown two sites; one template-built and one professionally built, and asked to evaluate them both individually and in comparison to one another. To ensure an unbiased testing environment, pre-existing sites for actual businesses were chosen and exhibited as-is, with no researcher influence on the designs. For the purpose of avoiding unlicensed use of copyrighted materials, the sites chosen were for businesses of personal acquaintances. This assures rights to use the materials, as well as affords this study the benefit of insider information about the implementation methods of each site. The templated website chosen was for the company Aravaipa Running and the professionally built site chosen was for Flip Dunk Sports. Each site fit the model of a small business looking to implement a website and deciding between one of the two implementation methods being studied. The chosen method for Aravaipa Running's website was WordPress.

Participants were first briefed with instructions on how to complete each section of testing to ensure the quality of responses. The test consisted of three sections, one section per website and then a third for comparative analysis. The first two sections asked participants to evaluate each site respectively on several key elements of usability and design: navigation, aesthetics, and accessibility.

Navigation was evaluated by using a card sorting technique, where users were given navigation titles and asked to sort them based on importance and group them if deemed similar. User responses to the card sorting exercise were compared against the existing site navigation to determine its efficiency and identify the differences between the two.

The next two elements being evaluated required participants to actually visit the existing site and evaluate it, based on questions constructed by the researcher. The first, aesthetics, was a general viewing exercise for the user and consisted of evaluating the overall design and aesthetic of the site by asking them to visit three main pages that would be used most often. The second element, accessibility, was evaluated by posing tasks to the participant based on basic usability expectations of the site and asked them to rate the difficulty of the task. Each task had detailed instructions, a rating system for the difficulty of the task, and a section for comments.

The final section compared aspects of each site to corresponding elements of the other, and users were asked to identify which site they believe performed better. The questions also built on the previous two sections and asked users which site they believe was easier to utilize based on the aforementioned elements being studied. Finally, users were asked to guess which site is the template-built site and which was created professional.

The information gathered during the usability testing served to quantify what aspects users deem most important to websites, as well as if there were any elements in particular that users identified more with templated sites versus professional built sites. For testing materials please reference Appendix B.

Cost Analysis

An analysis sought to identify the different cost structures for each web implementation strategy being studied. The cost analysis accomplished two key goals of this study: determine what the necessary investment costs for each approach including domain registration and web hosting services, and determine what the prospective returns of the method chosen.

The investment costs being investigated differed between each method due to the underlying source of the costs. The templated builder analysis investigated costs associated with subscription and domain registration, as well as post launch expenses for upkeep/site management. The professional site did not incur subscription service costs, however did require the inclusion of designer wages. Sites for this analysis were chosen based on popularity and success in the market. Designer wages were calculated using the average income for designers in the Phoenix market compiled from salary.com, indeed.com, and glassdoor.com and the cost estimation formulas established by Sherwin (2012, Operating your Studio, "Hourly Wages"). A compiled list objectively showed cost breakdowns, which was then combined with quantified elements from the previous tests to create a detailed cost/reward diagram. The diagram used the entry conditions and desired website performance to help businesses accurately decide on the best method of implementation. The sites chosen for templated website builder pricing information were Wix, Squarespace, WordPress and Weebly. In addition to each site's own capability of domain purchasing and hosting, two additional sites were chosen specifically for their domain pricing: GoDaddy and BlueHost.

RESULTS

Demographic Survey

Twenty-five participants completed the initial survey that was distributed for testing. The results indicated that of the users sampled for these two sites the majority belonged to the same user demographics. This provided an accurate picture of what the average site user would be. The first section of the survey consisted of basic demographic information to build an average user model. Of those that completed the test, 48% of participants were in the 21-25 age range. Thirty-six percent fell in the 26-30 category (Fig. 5). Of those tested, only 8% were over the age of 40 or under the age of 20. The average gender of participants based on the survey was 60% female, 40% male (Fig. 6).

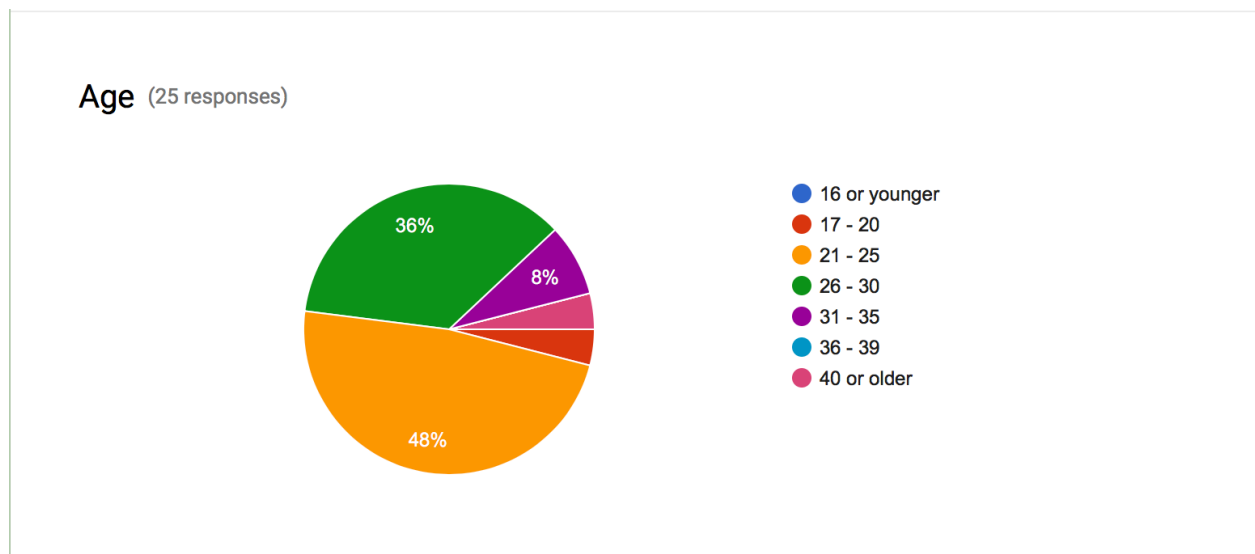


Fig. 5: Distribution of Participant Ages

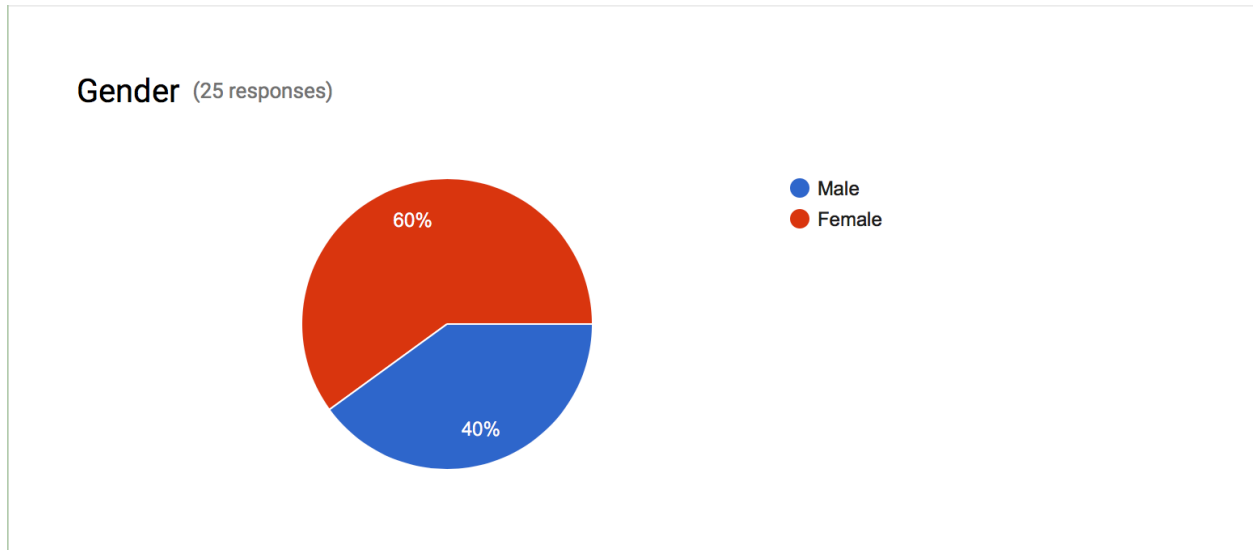


Fig. 6: Distribution of Participant Gender

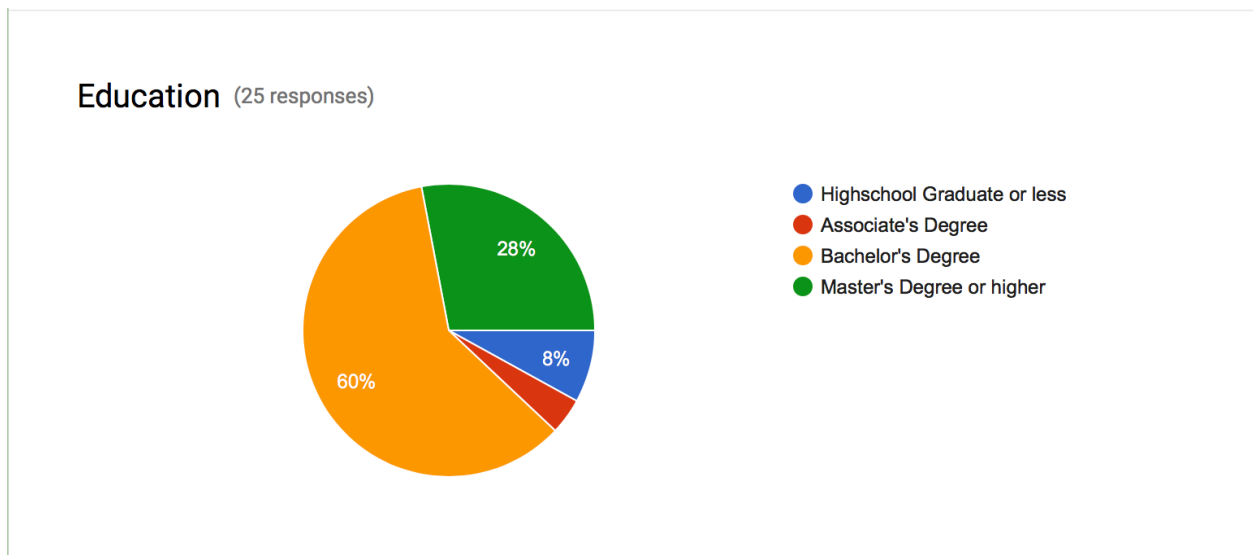


Fig. 7: Distribution of Participant Education

The education demographic revealed that the majority of users sampled have some form of higher learning, with 60% having earned a bachelor's degree and 28% a master's degree or higher. Only 8% were a high school graduate or less (Fig. 7). The majority of the participants are employed, with 68% being employed full time. Those not employed full time consisted of 16% that were

students, 4% that were part time, 4% that were unemployed and 12% that had another form of employment they did not specify (Fig. 8). Despite the majority of the sample being employed full time, the type of employer was a relatively even distribution. Positions with for-profit companies made up the majority with 31.8%, followed closely by non-profit at 27.3%. Those who chose not to specify their type of profession and selected other made up 13.6% of the sample. All other types of employment surveyed had the same amount of users at 9.1% (Fig. 9).

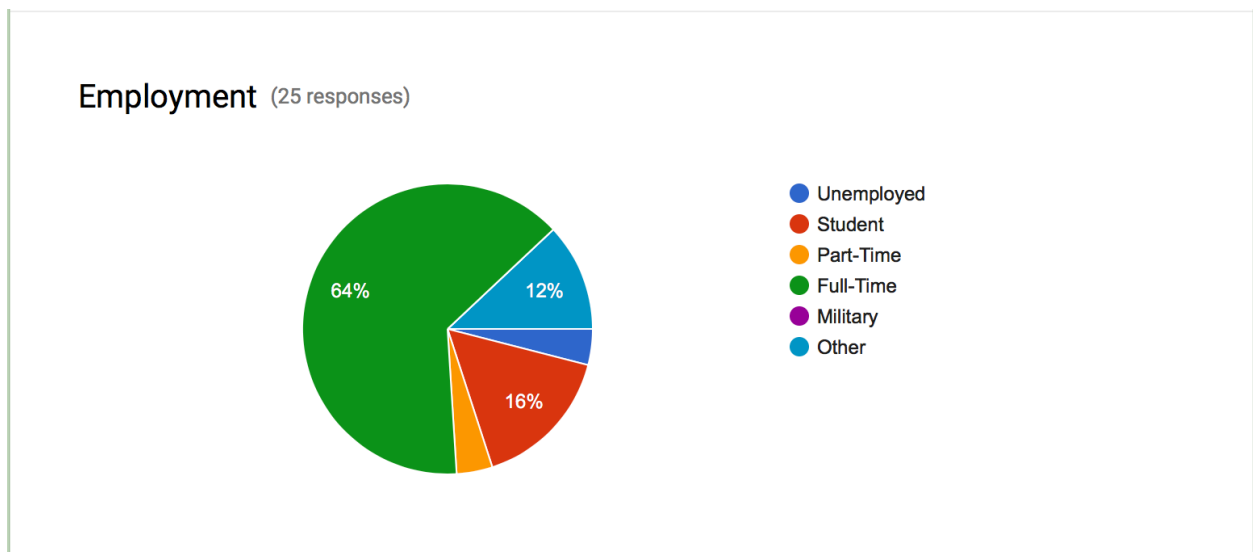


Fig. 8: Distribution of Participant Employment Status

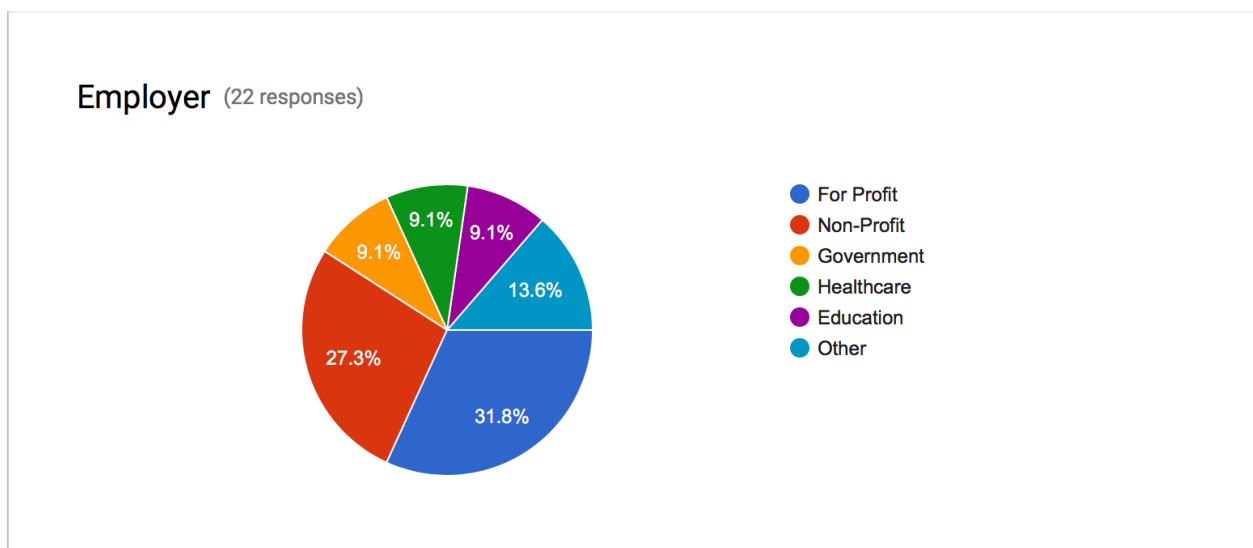


Fig. 9: Distribution of Participant Employer Types

As expected of users being surveyed for a study based on website usage, none marked their computer experience as being beginners. Of those polled, 76% rated their abilities as intermediate, while 24% described them as advanced. In conjunction, 80% of participants used the computer more than 20 hours per week and none used it less than 10 hours (Fig. 10).

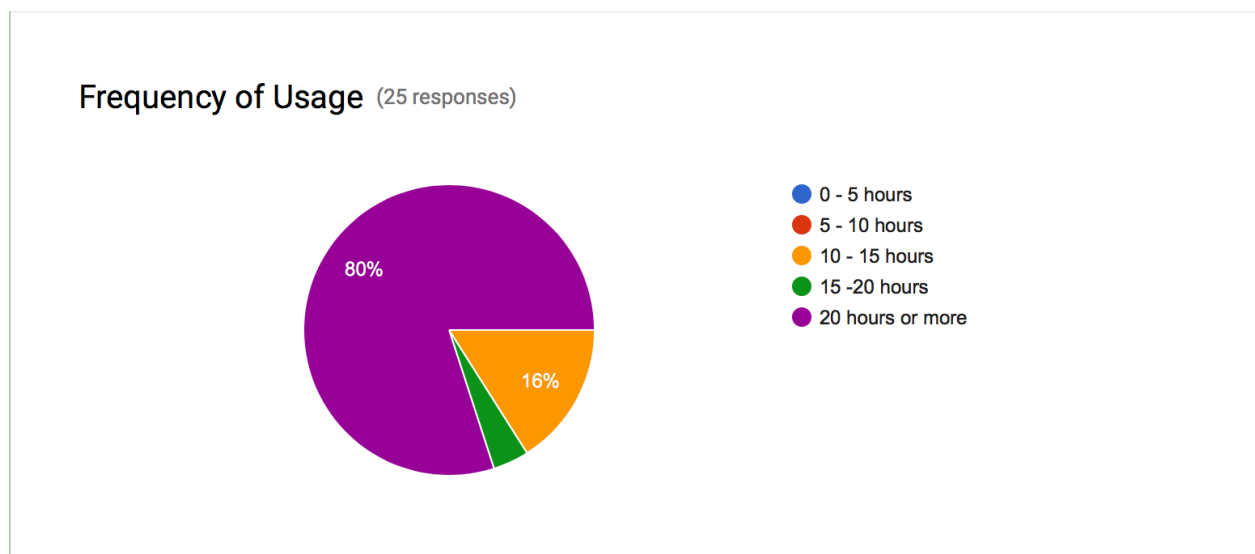


Fig. 10: Distribution of Participant Computer Usage

The results of the demographic section of the survey helped created basic profile for the average user of these websites: A person 21-30 years old, most likely female, who has some form of higher education and is employed full time, most likely for a for-profit company. This person has at least an intermediate computer experience level, and spends 20 hours per week or more using a computer.

The second section of the demographic survey asked participants subject questions about Internet usage habits, as well as specifically how they use the Internet to interact with businesses.

Over half of the users (56%) were very dependent on the Internet. Participants were asked what they primarily use the Internet for and given several categories and asked to choose as many as applied. Of the categories provided, 84% of users primarily used the Internet for work. The next most common usage was for Entertainment (76%) and Social Media (76%). Three other categories also were primary uses for over half the participants: Shopping (52%), News (56%), and Email (68%). The graph below details the category distribution (Fig. 11):

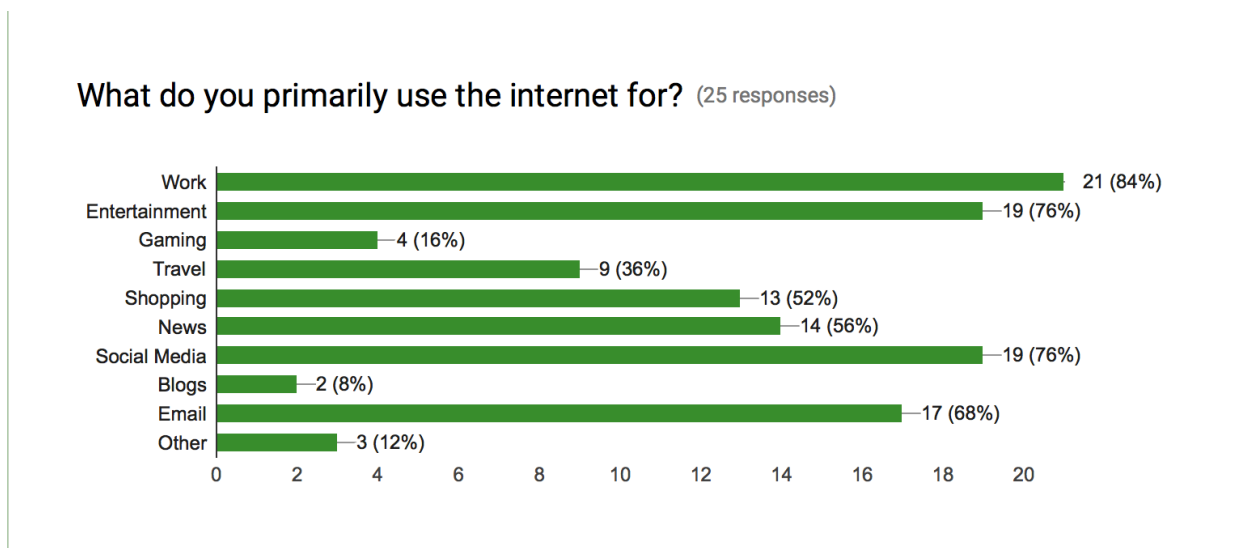


Fig. 11: Distribution of Participant Internet Usage

The majority of those polled frequently used the Internet to research businesses. On a rating scale, with 5 being the highest frequency, 72% of users rated the frequency of researching businesses online as a 4 or higher. With that degree of frequency, users will inevitably have expectations of what a business site should consist of. When polled about expectations of a website, users were asked to select all categories they believed should be expected on the site of a business. According to the participants, the most important aspects of a website for a business are Hours of Operation and Services and Pricing, both with 96% of those surveyed marking it as a priority. The

next element deemed important for the site was the Location (92%), followed closely by information About the Business (84%). The final element of note was the Contact Information, which 80% of participants identified as a priority. The rest of the options received the approval of half the participants or less. For the full breakdown, see Fig. 12 below.

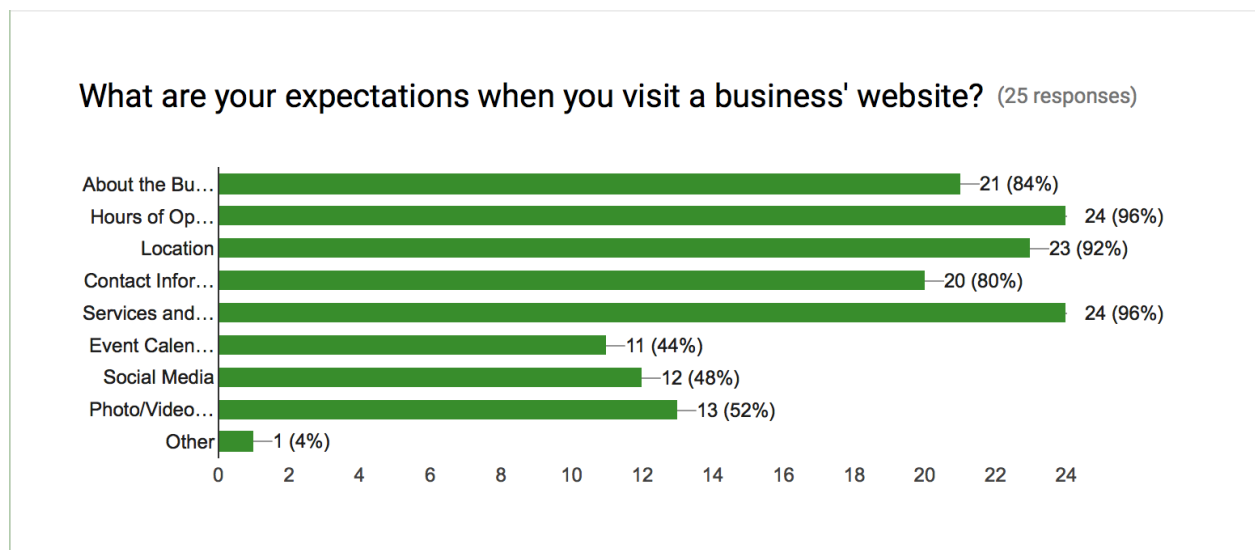


Fig. 12: Distribution of Participant Expectations for Business Sites

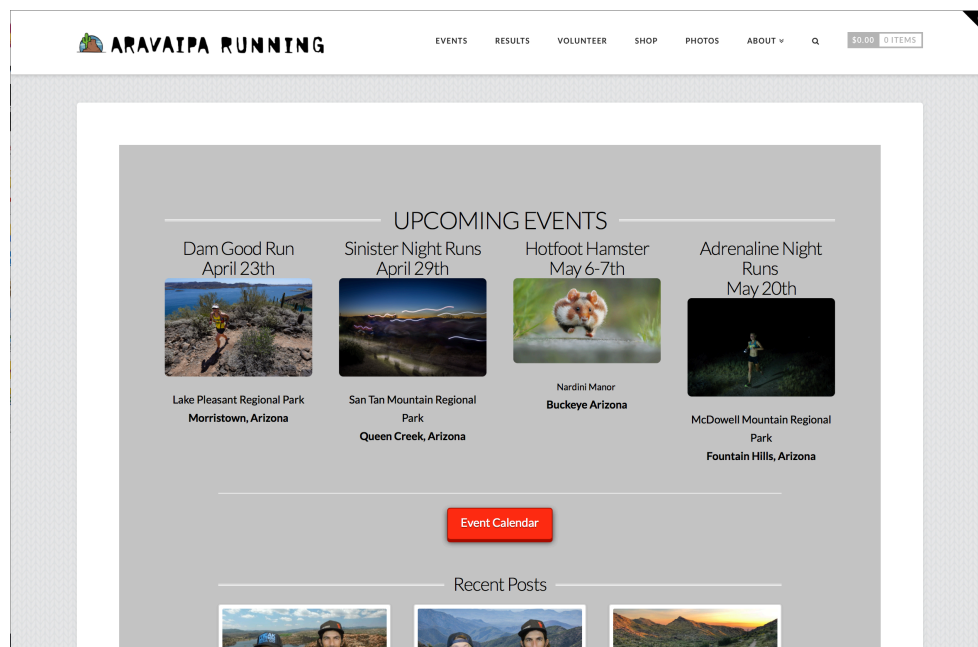
A surprising result of this portion of testing showed that participants were unanimous that the quality of a businesses' website affected their impression of the business itself. 76% stated that they have chosen to patronize a business based solely on the quality of their website. When asked what it was in particular that they identified as the most important aspect of a website, there was significant overlap in the user responses. User opinion seemed to resonate with three key aspects of a website: Aesthetics, Simplicity and Navigation. Specifically, participants stated that the ideal website should be simple, easy to use with straightforward navigation, and a visually appealing design.

Usability Test

Of the 25 participants in the first phase of testing, 17 opted to take part in further testing. Of those however, only 8 responded when contacted and took part in the usability test. The usability test was divided into three sections, each with several parts. The first two sections contained questions for each of the websites, while the third was used for comparative analysis. The first two sections were identical in form: part 1 consisted of a card sorting exercise to evaluate the navigation, part 2 questioned site design and aesthetics and part 3 contained tasks designed to test site usability.

The card sorting exercise took existing navigation items from each site and presented them to the examinee in random order. The navigation items chosen were from top level and secondary navigation on the home page. This includes sub-menu navigation as well as some page level navigation items. Participants were tasked with arranging the items in order of priority, as well as to group any they felt belonged together.

AravaipaRunning.com



Aravaipa Running: Card Sorting Results

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
Events	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Events	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Results	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Results	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Volunteer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	About	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contact	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Contact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Photos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Photos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FAQ	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	FAQ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
In The Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	In The Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racing Team	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Racing Team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
Events	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Events	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Results	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Volunteer	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Shop	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	About	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contact	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Contact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Photos	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Photos	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FAQ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	FAQ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In The Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	In The Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racing Team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Racing Team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

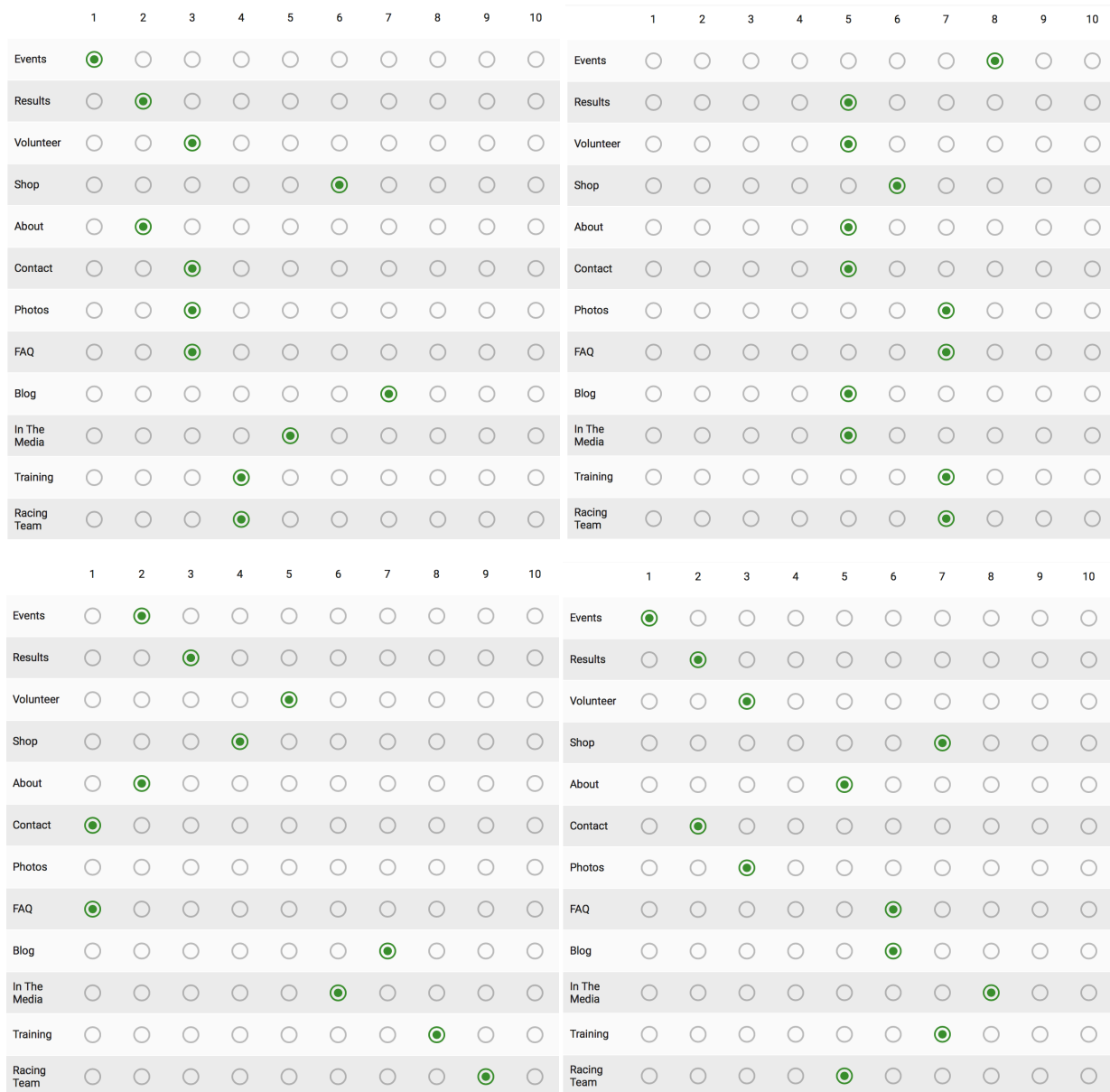


Fig. 13: Card Sorting Results for Aravaipa Running website

Figure 13 above shows the testing results from the card sorting exercise, with 1 being the highest priority rating and 10 being the lowest. If multiple items are rated as the same priority, it means users believed those should be grouped. There was a relatively diverse array of navigation sorting for the above dataset, with a few points of overlap. On average the two items ranked as the

highest navigation priorities were About and Events. Events were also the 2nd highest priority item. Photos were on average ranked 3rd, followed closely by FAQ at 4th. Many users chose to group what they believed were the best pairings of navigation items as well. The most consistently grouped items were Training and Racing Team, FAQ and Photos, and Blog and In The Media. A surprising observation was that after the initial 4 navigation items, there is very little consistency between the ratings. In one user's review Contact is rating at the very bottom, while in others it is as high as number 1. After reviewing the above data and averaging the results (Fig. 13), ideal navigation configuration for Aravaipa Running might be:

About > Events/Results > Photos > FAQ/Contact > Racing Team/Training/Volunteer > Blog > Shop > In The Media

FlipDunkSports.com

Arizona's ONLY Trampoline Park and Gymnastics/Dance Center
(602) 277-0067

FlipDunk SPORTS

Home Classes Parties Open Jump Company

THIS PLACE ROCKS!
- The Phoenix Suns Gorilla

Register for **open jump NOW!**

Reserve Your Open Jump Spot!

< Play video

Welcome to Flip Dunk Sports!

FlipDunk Sports is 19,000 sq.ft. of indoor, high-flying fun! It's a one-of-a-kind recreational experience that offers fitness activities for all ages and skill levels found nowhere else in the Valley. You'll literally be bouncing off the walls! With trampolines on the floors and walls, bungee trampolines and tumble tracks with basketball hoops for a slam dunk finish, the sky's literally the limit at Flip Dunk Sports.

Whether extreme fitness for adults or extreme fun for kids, you'll find it in the fitness classes offered for the entire family. Mom and tot classes run parallel to advanced training sessions, not to mention our awesome birthday party facilities to be enjoyed by the young and young at heart.

There's no age limit at Flip Dunk, or limit to our client's potential for physical fitness and wellness. With gymnastics, trampolines and workout classes there is something for everybody at Flip Dunk. Whether you want to take a class or just jump for fun we have it all. It's our philosophy here at Flip Dunk Sports that fitness, fun, and family are the three ingredients to a happier, healthier life. Now drink up!

Home | Class Descriptions | Schedules | Pricing | Specials | Parties | Open Jump | Company | Reserve your Open Jump Spot | Registration | Staff Bio's | Waiver | Employment | Contact | Community Contributions | Corporate Events | Links
Copyright© 2013, FlipDunkSports, LLC | Web services provided by eCreations

Flip Dunk Sports: Card Sorting Results

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
Home											Home										
Class Descriptions											Class Descriptions										
Schedules											Schedules										
Pricing											Pricing										
Specials											Specials										
Parties											Parties										
Open Jump											Open Jump										
Company											Company										
Reserve your Open Jump Spot											Reserve your Open Jump Spot										
Registration											Registration										
Waiver											Waiver										

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
Home											Home										
Class Descriptions											Class Descriptions										
Schedules											Schedules										
Pricing											Pricing										
Specials											Specials										
Parties											Parties										
Open Jump											Open Jump										
Company											Company										
Reserve your Open Jump Spot											Reserve your Open Jump Spot										
Registration											Registration										
Waiver											Waiver										

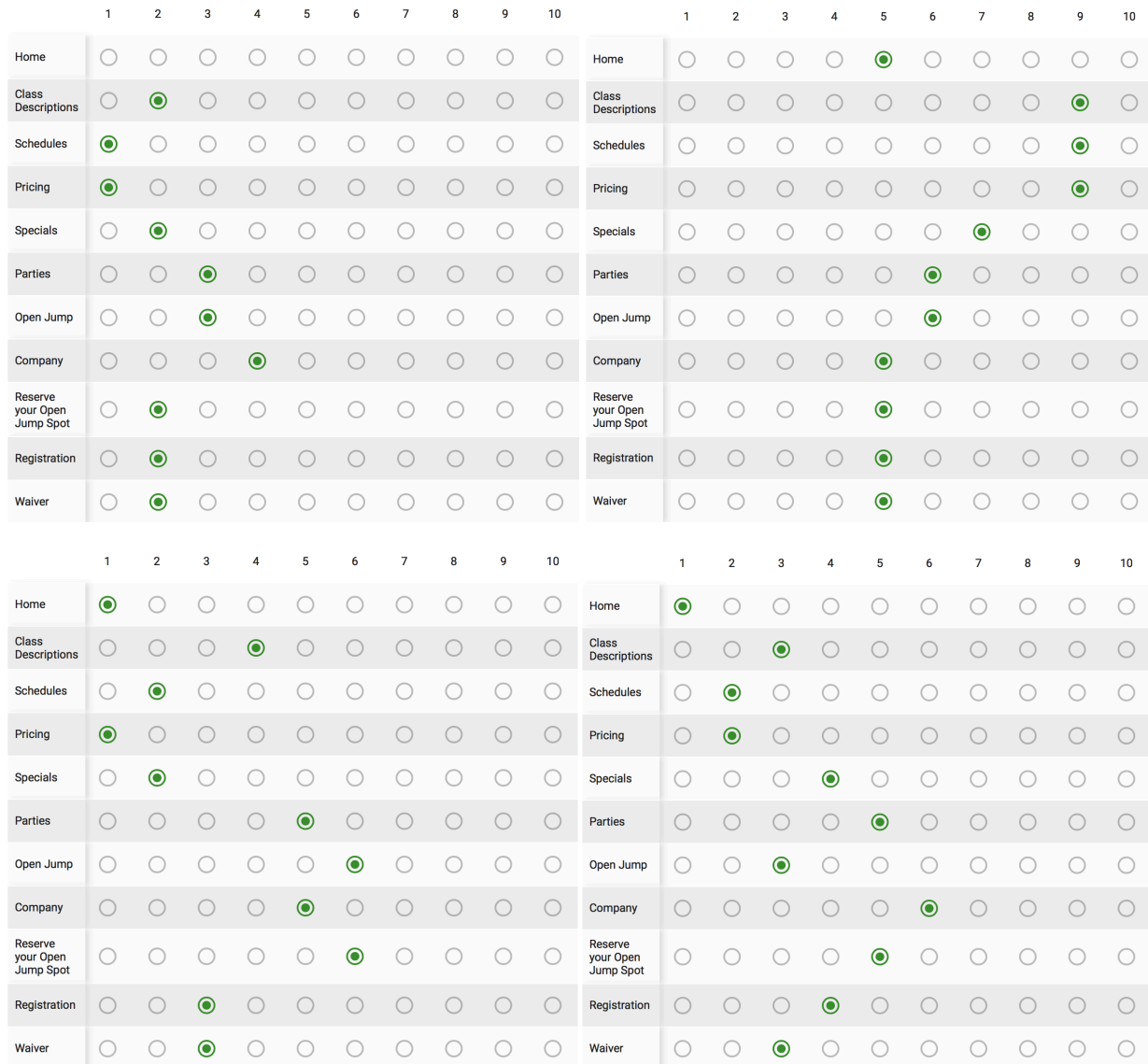


Fig. 14: Card Sorting Results for Flip Dunk Sports website

Figure 14 shows the results for the card sorting exercise of the second website. In contrast to the previous test there was less deviation in the results, with the majority of users selecting a similar hierarchy of navigation items. The home navigation item was almost unanimously rated as the item with the highest priority. Another interesting development in this test in contrast to the first was the use of item groupings, as well as the consistency of the groupings across multiple responses.

Schedules and Pricing were rated as the second highest and were grouped together by over 50% of

the participants. The amount of grouping that took place in this test was so significant that it actually makes it difficult to determine a hierarchy beyond the first two items, since so many of the remaining items were paired together in some way. After looking over the data, the ideal navigation configuration for this site would be much more condensed than the previous, with many items under the same header:

Home > Schedules/Pricing > Reserve/Registration/Waiver > Class Descriptions >Company > Parties/Specials > Open Jump

Part 2 of the usability test identified and rated factors of each website's aesthetics. Users were initially asked for first impressions of each site, and then questioned on how they would rate both the overall aesthetic as well as how effective individual elements were.

The results for Aravaipa Running consistently rated the first impression of the site as clean and easy to navigate; however, several users noted that it was "boring" and that the way it was presented could be worked on. Despite those detractions users rated the site favorably. Users were either pleased with the site or at worst neutral to it, with no responses rating it less than a 3 (on a scale of 1 to 5, 5 being the best). Of the 5 elements polled (Color, Design Simplicity, Imagery, Content Organization, and Business Branding), users rated the simplicity of the design most favorably, followed closely by the content organization. Color was rated rather favorably, with the majority of ratings leaning neutral to effective. Participants responses were split on the last two elements (imagery and business branding), with each receiving an equal number of both positive and negative ratings. For the users that rated imagery poorly in particular, the main note given was that the main purpose of the company was not reflected well with the way imagery was used on the site. In one participant's own words, "Trail running is a visual hobby, and the content in it could be showcased in a more photographic way."

The initial impressions for Flip Dunk Sports' website were more consistent, with the majority of participants liking the colorful, energetic look of the site. Only one user had a more negative impression, saying that the site looked "a little cheap". Despite the first impressions being almost entirely positive, the actual ratings for the site's overall aesthetic was actually lower than the rating's for Aravaipa. The majority of users rating the aesthetic scored it as either neutral or okay. In conjunction with the first impressions, when asked what the most effective aspect was of the site the overwhelming majority concurred that color was used most effectively. This was followed closely by content organization and business branding, the majority of whose ratings were effective to very effective. Users were more neutral on the effectiveness of the design's simplicity, but still considered it effective to some degree. The worst rated element was the site's use of imagery. The user comments were very interesting, as despite many high ratings across several elements the users seemed to deem the design busy, disjointed and as a re-iteration of a previous comment, cheap looking.

The third part of the tests were usability exercises, where participants were posed tasks and asked to complete them as efficiently as possible. Each site's tasks were constructed based on the responses to the demographic survey and which elements the users expected the most from visiting a business' site.

Aravaipa Running Tasks

Task #1: Find the dates of the next 100 mile race event hosted by Aravaipa Running (Fig. 15)

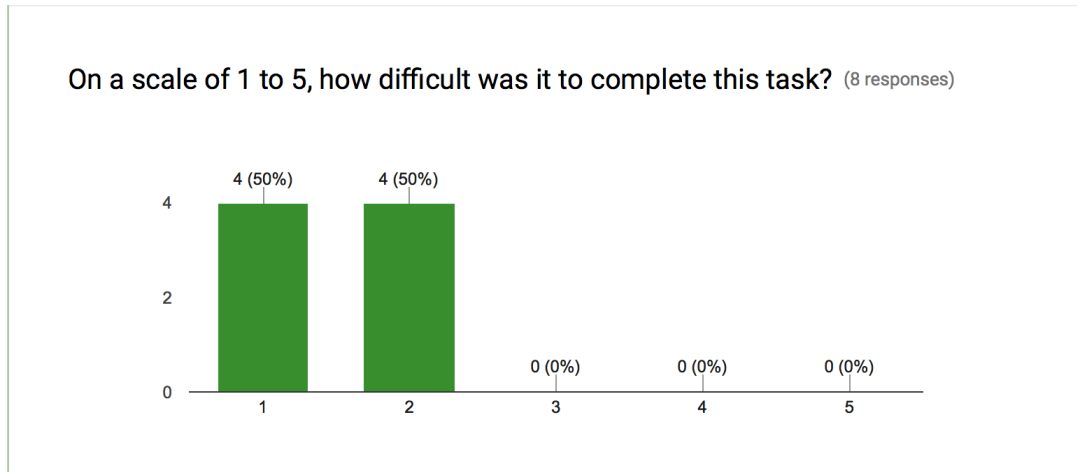


Fig. 15: Ease of use results for task #1

This first task was based on the user response to expecting information about a business' services. Participants were tasked with searching the site and finding the dates of the next event featuring a specific distance race. The results of the first test were very consistent, with all users completing it with the correct information. When asked to rate the difficulty, the responses were easy to very easy, and only one user recommended a function to filter races based on distance.

Task #2: Find what year Aravaipa Running was founded (Fig. 16)

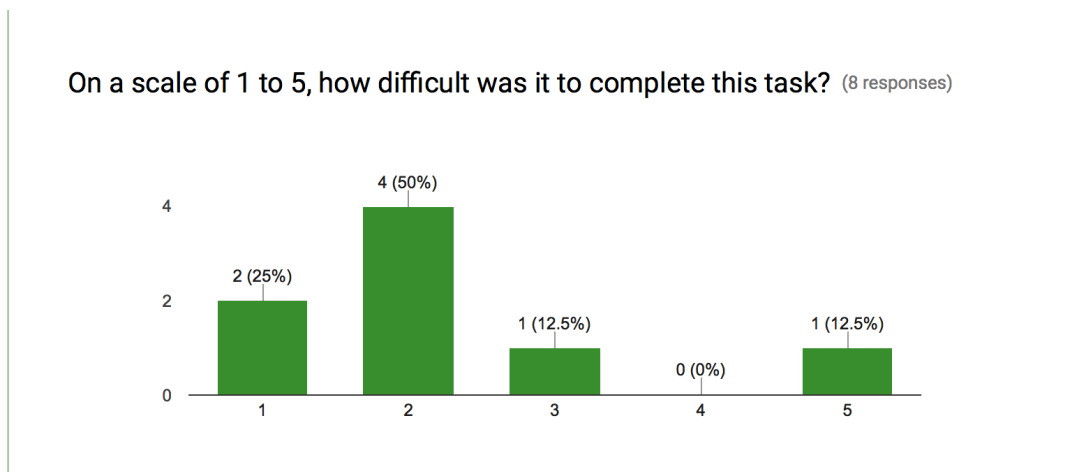


Fig. 16: Ease of use results for task #2

This test was designed around user's expecting information about the company. To test this, a piece of information from the about page was chosen for participants to find. When completing this task, the majority of users were able to complete it and find the correct answer, however several were incorrect. When asked how difficult it was, the majority marked it as easy while several who responded with difficult to very difficult. Despite differences in perceived difficulty, the user feedback was almost identical. All recommended putting information relevant to the company in a concise section at the top of the about page.

Task #3: Determine the benefits for volunteering at an aid station (Fig. 17)

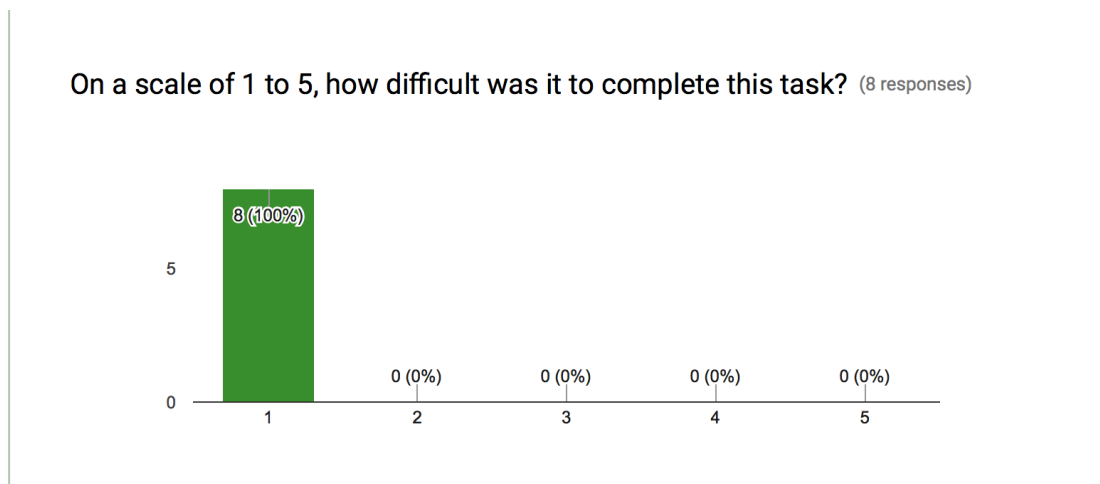


Fig. 17: Ease of use results for task #3

This question was also designed around user expectations for service information. Like the first task, users showed no challenge when finding this information. All the responses were correct, and users were unanimous in their difficulty rating (Very Easy). They also had no recommendations for making the task simpler.

Flip Dunk Sports Tasks

Task #1: Who founded Flip Dunk Sports? (Fig. 18)

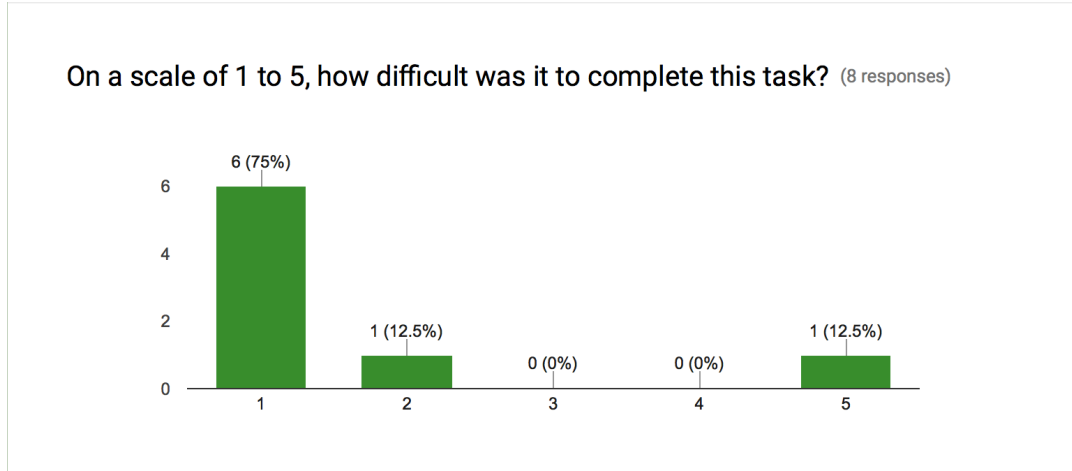


Fig. 18: Ease of use results for task #1

The first task was designed around user expectation for information about the company. Almost all users were able to complete the task with the correct answer, with only one unsure. The overall difficulty score was very easy, with again only a single outlier who marked it as very difficult. The general consensus among participants was that no recommendations were necessary. Only one user made a recommendation for the potential of a company timeline.

Task #2: Determine the cost of the extreme workout class (per hour) (Fig. 19)

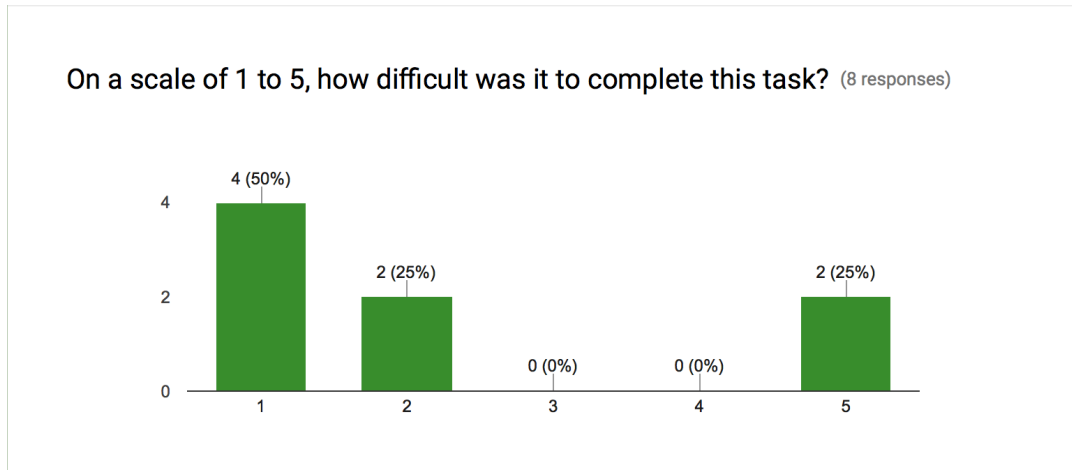


Fig. 19: Ease of use results for task #2

The second task was designed around the expectation users have to find information about services and pricing on a business' site. Flip Dunk Sports has extensive offerings with different pricing, so a specific class was selected for users to find information on. As in the previous test, the majority of users, save one, were able to complete the request with the correct answer. However the difficulty rating was split, with users scoring the task as both very easy and very difficult. Despite differences in difficulty scores, the feedback was relatively consistent, stating that the content could be organized into a table format to help make this task easier in the future.

Task #3: Determine the hours for open gymnastics (Fig. 20)

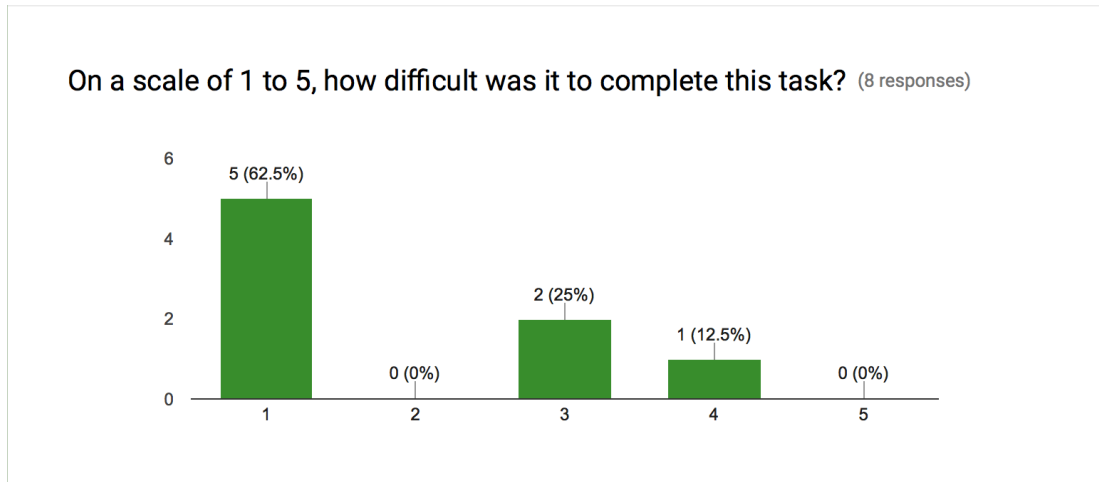


Fig. 20: Ease of use results for task #3

The third task again was based on the need for service information. Users were asked to find out when the gym was opened for a specific event. All users were able to complete this task, however not all answered correctly, instead confusing normal gym or even general business hours for the open gym hours asked for. Once again the difficulty rating was split, with several users choosing very easy and some others choosing a neutral or difficult stance. An interesting outcome of this task was a false-positive response, where users found an answer they believed to be right and therefore concluded that no recommendation was necessary. Thus despite the multitude of wrong answers there were almost no recommendations for improvement. The only one was that the font should be made bigger to increase legibility.

The third and final phase of testing was a comparative analysis to determine which site users believe performed better. To allow for a more specific rating scale instead of an arbitrary better or worse ranking, the sites were evaluated based on Layout, Branding, Aesthetics and Ease of Use. In all but Branding, Aravaipa Running was rated as being superior to Flip Dunk Sports. The final question

yielded perhaps the most surprising results. When asked which site was built using a template website builder and which was built by a professional, the majority of users actually chose Aravaipa as the professionally built site over Flip Dunk Sports.

Cost Analysis

The cost analysis collected data from several credible web sources and referenced business oriented design literature to determine potential costs for building a website. The results confirmed initial hypotheses from this report that the cost for having a professionally designed site versus a template built site were substantially higher. An undetermined factor to that cost though was the break out of individual costs that are included when subscribing to a templated builder. Based on the research, the majority of these sites bundle design costs (templates), web hosting, and some plans even domain registration costs within the subscription. For a professional site however, all these aspects are broken out as individual costs that when coupled with the designer fees can greatly increase the projected costs. For a full cost breakdown, see Figure 21 below:

COST BREAKDOWN		
Cost Factors	Templated Builder	Professional Designer
Subscriptions	<p>Wix: Connect - \$5.00/Month Combo - \$10.00/Month Unlimited - \$14/Month eCommerce - \$17/Month VIP - \$25/Month</p> <p>Squarespace: Personal - \$12.00/Month Business - \$18.00/Month</p> <p>WordPress: Personal - \$2.99/Month Premium - \$8.25/Month Business - \$24.92/Month</p> <p>Weebly: Starter - \$8/Month Pro - \$12/Month Business - \$25/Month</p>	N/A
Salary	N/A	\$32.09/Hr
Domain	<p>Bluehost (Top Level Domains): Registration - \$11.99 Renewal - \$15.99 Privacy - \$11.88</p> <p>GoDaddy: .com Price/Year - \$14.99 .net Price/Year - \$16.99 .org Price/Year - \$19.99</p> <p>*Some Template Site plans offer first year domain for free</p>	
Hosting	N/A	<p>Bluehost: Shared - \$3.95/Month Private Server - \$19.99/Month Dedicated - \$79.99/Month</p> <p>GoDaddy: Economy - \$3.99/Month Deluxe - \$4.99/Month Ultimate - \$7.99/Month</p>

Figure 21: Cost breakdown for website

All specific monthly and yearly pricing was obtained through the respective websites listed. The biggest obstacle was calculating average wages for a designer, since designer's set their rates differently. The average was calculated using Sherwin's formula (2012, Operating Your Studio, "Hourly Wages") and is based on salary estimates from three sources: salary.com, indeed.com, and glassdoor.com. The average salaries for web designers in the Phoenix area were: \$71,749/year (salary.com), \$48,190/year (glassdoor.com), and \$32.09/hr (indeed.com). To calculate an average cost per hour of work, each salary was converted to an hourly rate based on the work of Sherwin (2012), and then averaged normally with the rate found through indeed.com.

$$\$71,749 \div 45 \text{ (billable weeks per year)} = \$1,594.42/\text{week} \div 40 \text{ (hours per week)} = \$39.86/\text{hr}$$

$$\$48,190 \div 45 \text{ (billable weeks per year)} = \$1,070.88/\text{week} \div 40 \text{ (hours per week)} = \$26.77/\text{hr}$$

$$(\$39.86/\text{hr} + \$32.09/\text{hr} + \$26.77/\text{hr}) \div 3 = \$32.90/\text{hr} \text{ (Average Hourly Wage)}$$

The other element of the analysis was how each type of site performed in the usability study. Based on the different parts of the study, the templated site consistently performed well aesthetically. However inconsistencies in ease of navigation and site structure affected its usability scores. The professionally built site performed exceptionally on the usability tasks and also had superior branding, but did lag behind the templated site in terms of overall aesthetic. Figure 22 displays recommendations based on the results of both usability tests and cost breakdowns in a simple check sheet:

COST ANALYSIS		
Choice Factors	Templated Builder	Professional Designer
Cost	X	
Navigation		X
Content Organization	X	X
Branding		X
Aesthetics	X	
Usability		X

Figure 22: Cost analysis, based on cost breakdowns and usability tests

CONCLUSION AND RECOMMENDATIONS

Conclusions

The original scope of this project was to determine elements of two types of website building approaches and the factors used by businesses to choose between them. The results were analyzed and compiled to draw conclusions from and make recommendations for how businesses can go about choosing which to use, templated website builders or professional designers. At the beginning of this study specific research objectives were set forth. After the completion of testing and analysis of the results, each of the questions posed to guide the study can be answered.

1. What is the basic demographic for businesses utilizing a website?

An individual 21-30 years old, most likely female, with some form of higher education and employed full time. They have at least an intermediate level of knowledge working with computers and spend a minimum of 20 hours per week using a computer.

2. How do the users rate each site's aesthetics/design?

The results for Aravaipa's website consistently rated the aesthetics of the site as good, highlighting its clean, uncluttered design. In contrast the aesthetic rating of Flip Dunk Sport's website was subpar, with users citing its busy design and bright color scheme.

3. How do the users rate the ease of use of performing tasks on the site?

Aravaipa Running's website was praised by users for its simplicity, however the usability of the site was rated poorly due to poor content organization and navigation hierarchy. Flip Dunk Sports scored well on usability, with the majority of users completing all the tasks presented during the usability study and on average rating them as easy.

4. What is the difference in cost between a templated website and a professionally built one, both in initial construction as well as maintenance?

The difference in cost between the two types of web design can be answered by considering two elements: Subscriptions vs. Wages and Bundling. One of the biggest differentials in cost is the rate designers charge per hour for their work versus the monthly cost of subscription to a templated web builder. The second factor was bundling. Subscription based services bundle many additional costs with the subscription. Designers do not. Aspects of implementing and up keeping a website such as domain registration and hosting services can add up when coupled with a designers wages. Thus professionally designed sites are considerably more expensive to implement, and have the potential to be more expensive in upkeep as well.

5. Based on the cost analysis what is the best method for the business model?

Both methods have pros and cons that must be considered before selecting between the two. Using a professional designer will consistently yield a highly functional site, however that will come at a cost. Templated sites are a valid alternative, offering similar quality of form at a much lower entry point. Ultimately the decision is contingent on the business' ability and interest to invest or not.

6. What recommendations can be made for each site based on the user tests?

Aravaipa Running's website has potential, having beat out the professionally built site in several categories, most predominantly the aesthetics. However a lack of content organization and corresponding thoughtful navigation/site structure have hindered its usability. Reorganizing the site architecture and content accordingly could drastically improve site performance. Alternatively, Flip Dunk Sports' website was designed very thoughtfully and has accurate navigation and content organization the helps the

usability. However, it struggled during the aesthetic analysis with some users commenting that it appeared too “busy”. A cleaner, more modern design could rectify this without compromising the usability that has already been established.

Conclusion #1: Professional Services are Expensive

Based on the scope of a project, designer fees can easily exceed the cost of using a templated builder. Designers bill not only for time but also for expenses included in the project. This means that the additional costs of a domain and hosting will also be charged on top of the designer fees, many times at a premium depending on the pricing model being utilized by the designer (Sherwin, 2012, Managing Your Projects, “Estimating”). If the budget is the make or break for implementing a website, businesses should consider utilizing a templated builder which will significantly reduce overhead.

Conclusion #2: Usability comes at a cost

Designers are more expensive, but that expense is not superficial. Knowledge of the design process and how to properly structure form and content can make significant differences in a site’s usability. Though templated approaches are cheaper, and many times can look as good as a professionally built site, the person building it many times lacks a basic understanding of web design and usability concepts and instead guesses at what content should be put where. This is what Powell (2001) was warning about when discussing the separation of form and content.

Conclusion #3: There are no absolutes

Though the research shows that while designers cost more, they produce a more usable, better-designed product. It also contained situational outliers that proved the merit of the templated approach. Though it did not perform as well in the usability tasks, the participants who took part in the study consistently rated the templated site as having more polished aesthetics than the professionally built site. Though from a design perspective the professional site may be the better product, ultimately web design is about what the users want.

Recommendations

Recommendation #1: Hybrid Theory

The results of this study have shown that there are significant advantages and disadvantages to both a purely templated and purely professional approach to building a website. Templated sites are cheap and have a very stable aesthetic, but the separation of form and content in the design process as well as a lack of understanding on the web builder's part can lead to usability issues. Professional designers, on the other hand, are well versed in the design process and produce quality products with efficient usability, but at a price. The recommendation is to research a hybrid approach. The flaws in each approach can be summarized as a problem between pre-build and post-build. Templated sites are weak in pre-build; they lack a design plan to optimize the site structure and usability. Professional design approaches are weak post-build, which depending on the duration of the project can mean a hefty price tag. A hybrid approach of a designer laying out the basic site architecture and then building the site using a templated approach can keep costs low while highlighting the best aspects of each method.

Recommendation #2: Further Testing

This study had several limitations that became apparent after the conclusion of the tests. The first limitation of concern was the timeframe. The timeframe of this study limited the dataset to only two websites. This translates into significantly less data, meaning less information to base conclusions on. A second test with a broader timeframe could make use of multiple sites, allowing results to be compared not only to the performance of the opposite implementation method, but to confirm against those that fall into the same category as well.

Another confirmation method that could not be explored in this study was to implement actual change to the websites of each company and observe the changes in user interaction. This would have allowed for a more controlled testing environment, meaning researchers could construct studies with more detail.

The final limitation was the sites chosen for this project. As stated previously the sites were chosen to facilitate an easier exchange of information concerning the implementation methods of each site, since the researcher has a personal relationship with each of the businesses respective owners. However this translated to less control over site content and subsequently the user tasks as they related to that content. Each site has a much different business model and product. This means that the tasks that make sense for one test do not make sense for the other. Instead of trying to use identical tasks for each site, the methodology chosen was to use the top user expectations established by the demographic survey and build tasks that fulfilled those categories. This yielded comparable data, but by no means infallible. Additional testing could address this by utilizing sites with identical services or products to ensure the consistency of the information being search for.

REFERENCES

- Gehrke, D., Turban, E. (1999). *Determinants of Successful Web Design: Relative Importance and Recommendations for Effectiveness*. Retrieved from <http://ieeexplore.ieee.org/abstract/document/772943/?reload=true>
- Keevil, B., Keevil & Associates. (1998). *Measuring the Usability Index of Your Web Site*. Retrieved from <http://dl.acm.org/citation.cfm?id=296394>
- Martin, L., Penard, T., (2005). *Investing in a Website: A Top Dog or a Resource-Based Strategy for Firms?*. Retrieved from https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=977925
- Garrett, J. J. (2011). *The Elements of User Experience: User-Centered Design for the Web and Beyond, Second Edition* [Kindle Version 1.19.2]. Retrieved from Amazon.com
- Brown, D. M. (2011). *Communicating Design: Developing Web Site Documentation for Design and Planning, Second Edition* [Kindle Version 1.19.2]. Retrieved from Amazon.com
- Odden, L. (2012) *Optimize: How to Attract and Engage More Customers by Integrating SEO, Social Media, and Content Marketing* [Kindle Version 1.19.2]. Retrieved from Amazon.com
- Krug, S. (2014) *Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability* [Kindle Version 1.19.2]. Retrieved from Amazon.com

Sherwin, D. (2012) *Success By Design* [Kindle Version 1.19.2]. Retrieved from Amazon.com

Powell, T. (2002). *Web Design, The Complete Reference*. Retrieved from
<http://search.ebscohost.com.ezproxy1.lib.asu.edu/login.aspx?direct=true&db=nlebk&AN=80518&site=ehost-live>

Arola, K. L. (2010). The Design of Web 2.0: The Rise of the Template, The Fall of Design. *Computers and Compositions*, 27 (4-14)

Simmons, G., Armstrong, G. A., Durkin, M. G. (2008). A Conceptualization of the Determinants of Small Business Website Adoption. *International Small Business Journal*, 26 (351-389)

APPENDIX A

Demographic Survey

Graduate Website Demographic Survey

Thank you for participating in this study. The purpose of this survey is to collect demographic information on potential users for a local business' website. All personal identifying information is confidential and will only be seen by the researcher (myself). Please answer truthfully and to the best of your ability. Thank you once again for your time and help.

Basic Information

The following questions are to help the researcher build a basic user profile for you. Please answer them as accurately as possible.

1. Full Name

Please type your first and last name (For researcher use only, all participant names are confidential)

2. Age

Please select your age
Mark only one oval.

- ☐ 16 or younger
- ☐ 17 - 20
- ☐ 21 - 25
- ☐ 26 - 30
- ☐ 31 - 35
- ☐ 36 - 39
- ☐ 40 or older

3. Gender

Please select your gender
Mark only one oval.

- ☐ Male
- ☐ Female

4. Education

Please select the highest level of education you have completed
Mark only one oval.

- ☐ Highschool Graduate or less
- ☐ Associate's Degree
- ☐ Bachelor's Degree
- ☐ Master's Degree or higher

5. Employment

Please select your employment status
Mark only one oval.

- ☐ Unemployed
- ☐ Student
- ☐ Part-Time
- ☐ Full-Time
- ☐ Military
- ☐ Other: _____

6. Employer

If employed, please select the answer that best describes your employer
Mark only one oval.

- ☐ For Profit
- ☐ Non-Profit
- ☐ Government
- ☐ Healthcare
- ☐ Education
- ☐ Other: _____

7. Computer Experience

Please select the option that best describes your experience with computers
Mark only one oval.

- ☐ Beginner
- ☐ Intermediate
- ☐ Advanced

8. Frequency of Usage

Please select the average amount of time you spend on the computer (per week)
Mark only one oval.

- ☐ 0 - 5 hours
☐ 5 - 10 hours
☐ 10 - 15 hours
☐ 15 -20 hours
☐ 20 hours or more

Internet Usage Information

The following questions help establish your internet use habits.

9. How dependent are you on the internet?

Mark only one oval.

	1	2	3	4	5	
Not Dependent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Dependent

10. What do you primarily use the internet for?

please check all that apply
Check all that apply.

- ☐ Work
☐ Entertainment
☐ Gaming
☐ Travel
☐ Shopping
☐ News
☐ Social Media
☐ Blogs
☐ Email
☐ Other: _____

11. How frequently do you use the internet to research businesses?

Mark only one oval.

	1	2	3	4	5	
Not Often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Often

12. What are your expectations when you visit a business' website?

Please check all that apply
Check all that apply.

- ☐ About the Business
- ☐ Hours of Operation
- ☐ Location
- ☐ Contact Information
- ☐ Services and Pricing
- ☐ Event Calendar
- ☐ Social Media
- ☐ Photo/Video Gallery
- ☐ Other: _____

13. Does the quality of the website affect your impression of the business?

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

14. Have you ever chosen to use a business based solely on their website?

Mark only one oval.

- ☐ Yes
- ☐ No

15. In your own words, what do you believe to be the most important aspect of a website for a business?

Follow Up

16. Would you be willing to participate in another round of testing?

After this initial round of testing is complete, several users will be selected to perform a more in depth study specific to the website being used for the project. If you are willing to participant, please indicate so below. If you choose yes, you will be contacted with further information, at which point you can still choose to abstain from further testing.

Mark only one oval.

☐ Yes

☐ No

Powered by



APPENDIX B

Usability Test

Graduate Usability Test

Thank you for taking part in this study. The following test will have participants look at two websites: one built using a templated site builder and one built by a professional designers. You will be asked to evaluate and compare several elements of each site's design and usability. Questions will consist of rating scales, as well as short answers. Please answer to the best of your ability. Further instructions will be provided in each section.

1. Name

Website #1: Aravaipa Running

In this section you will be asked to review the website for Aravaipa Running, a local trail race organizer. Please follow the instructions of each section to answer the questions.

Part 1: Card Sorting

This exercise will evaluate the navigation and site structure by sorting existing navigation items and then comparing them to the existing site structure to identify differences.

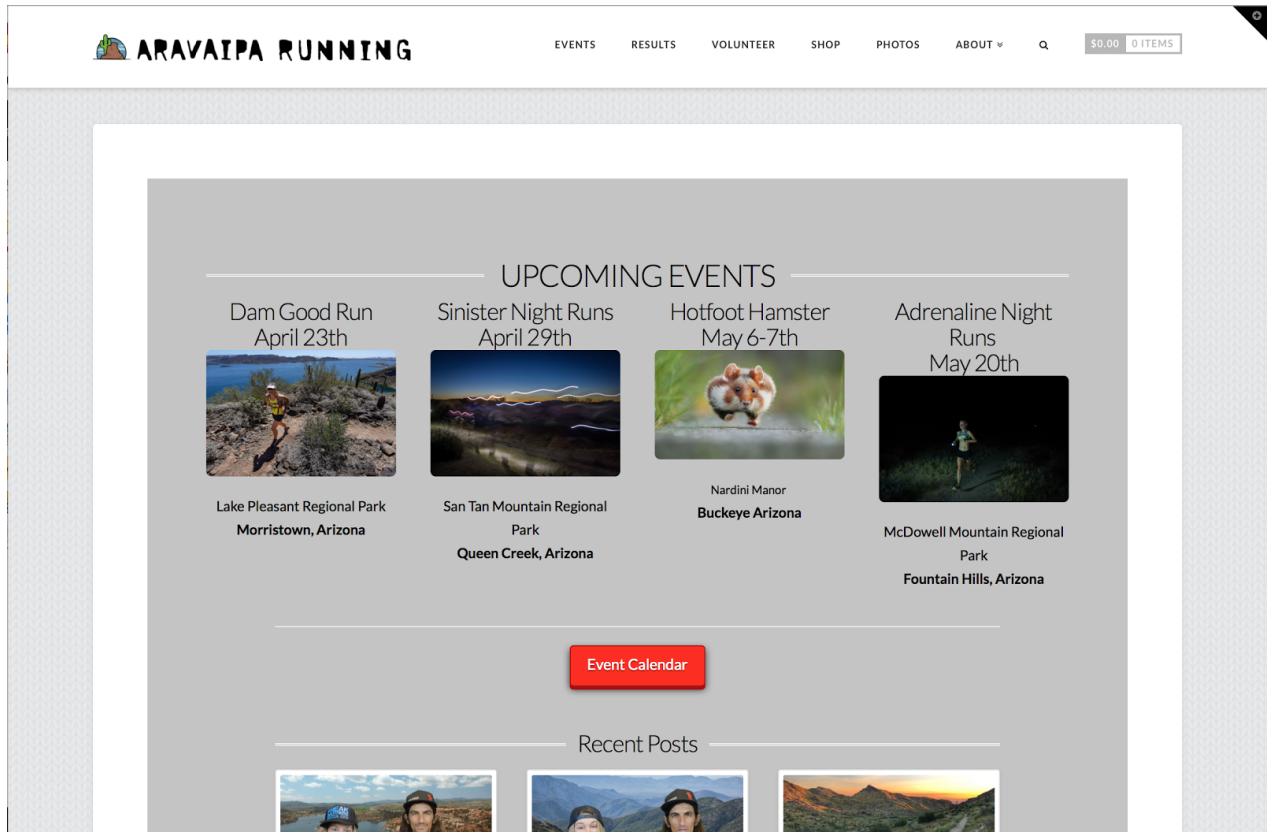
2. Please sort the following navigation items in order of priority.

Order the navigation items from 1 through 10, with 1 being the highest priority. If you feel that items should be grouped together, please select the same priority level for them.
Mark only one oval per row.

	1	2	3	4	5	6	7	8	9	10
Events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Photos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FAQ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In The Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racing Team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 2: Aesthetics

This section will evaluate the overall aesthetics of the site. Please navigate to the site (<http://www.aravaiparunning.com>) and answer the following questions.



3. What were you first impressions of this site?

4. On a scale of 1 to 5, how would you rate the overall aesthetic of the site?

Mark only one oval.

	1	2	3	4	5	
Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Great

5. Please rate the following elements of the site based on how effective you believe them to be.

Mark only one oval per row.

	Very ineffective	ineffective	Neutral	Effective	Very effective
Color	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design Simplicity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imagery (Quantity and Quality)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Content Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Branding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. For the elements you marked as ineffective or worse, do you have any recommendations on how they can be improved?

Part 3: Website Tasks

This section will pose several tasks and evaluate how quickly and easily they can be accomplished. This will evaluate the overall usability of the site and how it performs in response to user needs. Each task will start from the site home page and ask you to find a specific piece of information about the business. If you can't find the information, please indicate so in your answer.

7. Task 1: What are the dates of the next 100 mile race event Aravaipa Running is hosting?

START HERE (<http://www.aravaiparunning.com>)

8. On a scale of 1 to 5, how difficult was it to complete this task?

Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

9. Do you have any recommendations to make this task easier?

10. Task 2: What year was Aravaipa Running founded?

START HERE (<http://www.aravaiparunning.com>)

11. On a scale of 1 to 5, how difficult was it to complete this task?

Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

12. Do you have any recommendations to make this task easier?

13. Task 3: What benefits are there to volunteering at an aid station?

START HERE (<http://www.aravaiparunning.com>)

14. On a scale of 1 to 5, how difficult was it to complete this task?
Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

15. Do you have any recommendations to make this task easier?

Website #2: Flip Dunk Sports

In this section you will be asked to review the website for Flip Dunk Sports, a local trail trampoline park. Please follow the instructions of each section to answer the questions.

Part 1: Card Sorting

This exercise will evaluate the navigation and site structure by sorting existing navigation items and then comparing them to the existing site structure to identify differences.

16. Based on your own opinion, please sort the following navigation items in order of priority.
Order the navigation items from 1 through 10, with 1 being the highest priority. If you feel that items should be grouped together, please select the same priority level for them.
Mark only one oval per row.

	1	2	3	4	5	6	7	8	9	10
Home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Class Descriptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schedules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pricing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open Jump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reserve your Open Jump Spot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Registration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Waiver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 2: Aesthetics

This section will evaluate the overall aesthetics of the site. Please navigate to the site (<http://flipdunksports.com>) and answer the following questions.



17. What were you first impressions of this site?

18. On a scale of 1 to 5, how would you rate the overall aesthetic of the site?

Mark only one oval.

	1	2	3	4	5	
Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Great

19. **Please rate the following elements of the site based on how effective you believe them to be.**

Mark only one oval per row.

	Very ineffective	ineffective	Neutral	Effective	Very effective
Color	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design Simplicity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imagery (Quantity and Quality)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Content Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Branding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. **For the elements you marked as ineffective or worse, do you have any recommendations on how they can be improved?**

Part 3: Website Tasks

This section will pose several tasks and evaluate how quickly and easily they can be accomplished. This will evaluate the overall usability of the site and how it performs in response to user needs. Each task will start from the site home page and ask you to find a specific piece of information about the business. If you can't find the information, please indicate so in your answer.

21. **Task 1: Who founded Flip Dunk Sports?**

START HERE (<http://flipdunksports.com>)

22. **On a scale of 1 to 5, how difficult was it to complete this task?**

Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

23. Do you have any recommendations to make this task easier?

24. Task 2: How much does the Extreme Trampoline Workout class cost (per hour)?

START HERE (<http://flipdunksports.com>)

25. On a scale of 1 to 5, how difficult was it to complete this task?

Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

26. Do you have any recommendations to make this task easier?

27. Task 3: What are the hours for open gymnastics?

START HERE (<http://flipdunksports.com>)

28. On a scale of 1 to 5, how difficult was it to complete this task?

Mark only one oval.

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

29. Do you have any recommendations to make this task easier?

Comparative Analysis

This section will compare the two sites based on previous responses and rate which was more effective out of several categories. If you feel that the site's performed equally in that regard, simply select "no difference".

30. Please select which site you felt was superior in:

Mark only one oval per row.

	Aravaipa Running	Flip Dunk Sports	No Difference
Layout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Branding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aesthetics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Which site do you believe was created using a templated builder and which was created by a professional designer?

Mark only one oval per row.

	Templated Website Builder	Professional Designer
Aravaipa Running	<input type="radio"/>	<input type="radio"/>
Flip Dunk Sports	<input type="radio"/>	<input type="radio"/>

Powered by



APPENDIX C

Keevil Usability Index (Example Form)

Measuring the Usability of Your Web Site

Usability Index Checklist for Web Sites				
You can use this checklist to calculate the Usability Index of your Web site.				
Add or delete questions to match your requirements.				
Answer each checklist question with not applicable (N/A), yes, or no.				
If a category is missing (for example, no search tool) answer all questions in the category no.				
To determine the Usability Index count the number of yes answers compared with the total of the yes and no answers.				
With the Microsoft Excel 5.0 spreadsheet, use yes=1 and no=1 and the Usability Index is calculated for you.				
In the collaborative spirit of the Web, you can use this checklist for research; however,				
any commercial or business use requires prior permission from Keevil & Associates.				
Email any questions to Benjamin Keevil (bkeevil@sympatico.ca) at				

www3.sympatico.ca/bkeevil/.				
This checklist was updated on September 13, 1998 from focus group feedback. To print, scale to 80%.				
Copyright (c) 1998 Keevil & Associates.				
Usability Index (calculated by Excel as a per cent)		76		
What is the name of the Web site?		Keevil & Associates		
What is the location (URL) of the Web site?		http://www3.sympatico.ca/bkeevil/		
What is the main purpose of the site?		Sell technical writing services		
(sell products or services, advertise jobs, conduct research, upgrade products, display information)				
What is the style of the site?		Simple technical		
How many users are there?		100		
When was the usability index measured?				May-98
Checklist Questions				
Finding the Information	N/A	Yes	No	For more information...
Contents				
Contents list included?		1		Nielsen usability 1994
Links in contents list correct?		1		
Site Map				
Site map included?		1		Nielsen usability 1994
Links in site map correct?		1		
Headings labelled correctly?		1		
Two or three highest heading				

levels included?		1		
Capitalization, spelling, and punctuation correct?		1		
Acronyms avoided where possible?		1		
Headings (Choose one page at random)				
Headings brief and informative?		1		
Headings unique?		1		
Headings parallel?		1		
Headings stand out on the page?		1		
At least one heading on every page?		1		
Each heading accurately reflects tasks or information?		1		
Search				
Search tool included for sites with over 20 pages?			1	
Choose a topic at random -- can you find it?			1	
Index				
Index included?			1	
Entries in alphabetical order?			1	
Secondary and tertiary entries included?			1	
Up-to-date information				
Is the date of the last update indicated?		1		
Is there an automatic update notification mechanism?			1	
Is new information indicated?		1		
Finding an answer				
Choose a simple fact - can a user find it?		1		
Can the user find the answer in 10 minutes?		1		

Glossary				
Glossary included?			1	
Introductory statement correct?			1	
All specialized terms in site included?			1	
Terms not used in site eliminated?			1	
Format correct?			1	
Entries in alphabetical order?			1	
Lead-in wording of entries parallel and correct?			1	
Cross-referencing style correct?			1	
Acronyms treated correctly?			1	
Glossary proofread for spelling and punctuation?			1	
Definitions consistent with site definitions?			1	
Terms and definitions copied from organizations credited?			1	
Understanding the Information	N/A	Yes	No	
Overview Page				
Is an "Overview" page or picture included?		1		Nielsen 1994
Product description included?		1		
Description of relation to other products correct?		1		
Purpose and uses of product described?		1		
About This Site Topic (for 50-page sites)				
For 50-page sites, "About This Site" topic included?		1		
Sentence describing the site included?		1		
Sentence describing the				

product or service included?		1		
Topic "Organization of this site" included or implied?		1		
Topic "How to use this site" included?		1		
Topic "Software Release" included for software products?	1			
Topic "Who should read this site" included?		1		
Figure "Product Documentation Map" included?	1			
Topic "Related Publications" included?	1			
Topic "Prerequisites and Corequisites" included?	1			
Topic "Conventions in This site" included?	1			
Topic "Getting Help" included?		1		
Organization of the Site				
Does every major topic have an "Introduction".		1		
"Introduction" part informative?		1		
Is the "inverted information pyramid" used?		1		http://useit.com
Organization conforms to style guidelines?		1		
Heading levels appropriate to level of detail?		1		
Headings task-based?		1		
Structure of lists parallel?		1		
Structure of procedures parallel?		1		
Structure of examples parallel?		1		
Each paragraph has main				

idea, described in topic sentence?		1			
Presentation moves from general to specific?		1			
Presentation moves from simple to complex?		1			
Information complete?		1			
Information limited to appropriate and necessary topics?		1			
Information in correct sequence?		1			
Procedures task oriented?		1			
Summary included and accurate?		1			
Style (Choose five pages at random)					
Style conforms to desired style?		1			
Editorial comments added or otherwise resolved?		1			
Active and passive voices used appropriately?		1			
Second person used appropriately?		1			
Present tense predominates?		1			
Reading level acceptable?		1			
One-sentence paragraphs used sparingly?		1			
Sentences simple but not terse?		1			
Latin words and abbreviations eliminated where possible?		1			
Transitions between topics smooth?		1			
Instructions in imperative mood?		1			
Positive expressions and					

expressions predominate?		1		
Abbreviations, acronyms, and symbols used sparingly?		1		
Abbreviations and acronyms in prescribed style?		1		
Imprecise (vague) words replaced with precise ones?		1		
Jargon avoided?		1		
Redundant and extraneous words removed?		1		
Coining of verbs, adjectives, and nouns avoided?		1		
Noun strings limited to maximum of three words?		1		
Examples				
Examples included?	1			
Examples relate well to tasks?	1			
Examples tested and approved?	1			
Complexity of examples appropriate for audience?	1			
Figures				
Figures consistent in font, layout, and style?	1			
Figures flow in an obvious manner?	1			
Figures easily interpreted?	1			
Figures suit information presented?	1			
Figures useful?	1			
Figures sufficient in number?	1			
Figures appropriately titled and numbered?	1			
Each figure title unique?	1			
Figures referenced in preceding text?	1			
Titles, callouts, and				

annotations informative?	1			
Figures correctly integrated with the text?	1			
List of Abbreviations				
List of abbreviations included?			1	
Entries in alphabetical order?			1	
Style correct, concise, and readable?			1	
Terminology				
Approved terminology used?		1		
Terminology based on standards?		1		
Sources of specialized terminology listed in bibliography?		1		
General terms used as defined in Webster's dictionary?		1		
Naming conventions applied correctly and consistently?		1		
Highlighting conventions consistent and correct?		1		
New terms highlighted and defined when first used?		1		
Synonyms avoided after meaning of terms established?		1		
Meaning of each term consistent throughout each site?			1	
Meaning of each term consistent throughout set of sites?		1		
First occurrences of abbreviations follow spelled-out words?		1		
Level of technical terms appropriate to audience?		1		

Depreciated, restricted, and forbidden words avoided?		1			
Difficult-to-translate words avoided?		1			
Supporting User Tasks	N/A	Yes	No		
User-Oriented Tasks					
Does the title of the site represent a major task?		1			
Do the topics represent subtasks?		1			
Does the topic order represent the subtask order?		1			
Does each topic have a clearly defined goal?		1			
Is there a procedure for a basic, getting started task?		1			
Does each task have an introduction?		1			
Are the tasks described using action verbs?		1			
Does the graphical user interface emulate the product?	1				
Tasks					
Choose a task - can you complete the task in 10 minutes?		1			
Interactive Tasks					
Are reply forms shorter than one page?		1			
Does the site use QuickTime movies?	1				
Information Updates					
Is the date of the last update indicated?		1			
Is there an automatic update notification mechanism?			1		
Is new information indicated?		1			
User Questions					

Are Frequently Asked Questions (FAQ) included?		1		
For example - How to install the software?	1			
For example - How to start the application?	1			
For example - How to exit from the application?	1			
For example - Where to get help information?	1			
Evaluating the Technical Accuracy	N/A	Yes	No	
Technical Content				
Product names and numbers correct?		1		
Warning and caution notices included and correct?	1			
All outstanding technical issues resolved?		1		
Content technically accurate?		1		
Content tested by technical writer?		1		
Content tested by verification team?			1	
Content approved by product development?	1			
Content approved by product management?	1			
Content approved by product marketing?	1			
Content approved by legal and patents?	1			
Presenting the Information	N/A	Yes	No	
Display Speed (Choose three pages at random)				
Home page displays within				

10 seconds with a 33.6 modem?		1		
If not, is there feedback indicating the delay?	1			
Are graphics under 25K in size?		1		
If more than 5 graphics on a page, are they 15k or smaller?		1		
For URL (URI) links, is the final slash included?		1		
Are WIDTH and HEIGHT attributes included on all images?			1	
Are WIDTH and HEIGHT attributes included on all tables?			1	
Are complex tables split into simple tables?			1	
Links				
Is there advance notice before downloading large files?		1		
Are thumbnail pictures at least 1 x 2 inches (2.5 x 5.0 cm.)?			1	
Is there at least one link on every page?			1	
Is the color of the link correct?			1	
HTML Format (Choose one page at random)				
Do pages display on small 2 x 3 inch (5.0 x 7.5 cm.) terminals?		1		
Is standard HTML code used?		1		
International Format				
Are international audiences recognized?			1	

Are meeting times international?	1			
Are icons international?	1			
Are metaphors international?	1			
Text Format (Choose three pages at random)				
Text left justified and ragged right?		1		
Format consistent throughout the site?		1		
Figures and tables aligned correctly?		1		
White space used effectively?		1		
Information presented in readable blocks?		1		
Major topics begin on separate pages?	1			
Bad line breaks corrected?		1		
Sentences not continued across pages?		1		
No widowed headings?		1		
No orphans?		1		
Mechanics (Choose five pages at random)				
Spelling correct?		1		
Punctuation correct?		1		
Grammar correct?		1		
Cross-references used only when necessary?		1		
Cross-references to other parts of site use "see"?	1			
Cross-references to other sites use "refer"?	1			
Changes marked accurately with correct revision characters?	1			
Spelling checker runs error				

free?		1		
Readability checker indicates appropriate level?		1		
Lists				
List formats appropriate for items listed?		1		
Lists punctuated correctly?		1		
Messages				
Messages (for example, errors) included and accurate?	1			
Message format correct?	1			
Message style consistent?	1			
Messages as brief as possible?	1			
Trademarks				
Trademarks acknowledged correctly?		1		
Trademarks used as adjectives modifying nouns?			1	
Appendixes or References				
References included and correctly placed?	1			
References consist of related but not vital information?	1			
References referred to from topics?	1			
Printing				
For a 50-page site, can you download a 2-page file?			1	
Do all the text and graphics print?			1	
Does the file print on A4 and US letter size paper?			1	

Summary of Questions	N/A	Yes	No	Total	
Finding the Information	0	18	18	36	
Understanding the Information	20	60	4	84	
Supporting User Tasks	6	12	1	19	
Evaluating the Technical Accuracy	5	4	4	13	
Presenting the Information	15	25	11	51	
Total number of questions that you answered.	46	119	38	203	
This checklist has 203 questions in total.					
Calculating the Usability Index	N/A	Yes	No	Usability Index (per cent)	
100 x (Total Yes Answers)/(Total Yes + No Answers)	46	119	38	76	

Last Updated on 9/17/98
By Benjamin Keevil