Usability of WordPress for Visual Communication Designers

A thesis submitted to the School of Visual Communication Design,

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by

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Chapter I: Introduction

Assessing usability has been around almost as long as the Internet itself. Usability is an important tool to measure a user's ability to use and interact with the interface of a website. It falls under the discipline of human computer interaction, the study and design of user interfaces. Established usability guidelines help developers build a website that is easy for end users to accomplish tasks through the front end of a website. One type of website, a content management system (CMS) allows tasks to be performed at the back end through an administrative layer. In a CMS, the front end of the website can be built through that administrative layer as well as the management of how content is displayed all without knowing how to code. This study will be looking at the usability of the administrative layer of one content management system in particular, WordPress.

Different types of users can be authorized to access the administrative layer of a website. This study will only be focusing on the visual communication designer as user. Frascara defines visual communication design as:

the process of conceiving, programming, projecting, and realizing visual communications that are usually produced through industrial means and are aimed at broadcasting specific messages to specific sectors of the public. This is done with a view toward having an impact on the public's knowledge, attitudes, or behavior in an intended direction (p. 2).

Production means typically include print and web but are limited to web for the purposes of this study.
Another user that would work on the back end would be a web developer. Web development is “building, creating and maintaining websites. It includes aspects such as web design, web publishing, web programming, and database management” (TechTerms.com, 2013). The visual communication designer concentrating on web design has noticed the lines between designer and developer are blurring. A typical job description for a designer working in web today seeks qualifications that include both the technical and graphical sides of building a website. That means candidates must not only be able to design a website but also possess a strong understanding of HTML and CSS, responsive design or mobile design and experience working with leading content management systems.

As job lines are blurring, the market is growing. The number of websites switching from a static site to a content management system grew by 6.8% in 2013 alone (Synelnychenko, 2013)(W3Techs, 2014). Currently, Software Developer is ranked as the number one job for 2014 (Graves, 2014). With a growing industry and more designers in crossover roles, this study will look at usability of the administrative layer for the visual communication designer. WordPress was chosen because it is currently the most popular content management system (W3Techs, 2014). The goal of this study is to determine if usability problems exist within the WordPress administrative layer that may be negatively affecting visual communication designers using this application. This study can open the door to further research and discussions around visual communication designers as users and to acknowledge usability issues with WordPress. Literature searches on the subject were not productive and there is a lack of research on the subject, so any contribution to this body of knowledge will be important.
Two usability studies were performed. First, a heuristic walkthrough was conducted of the WordPress interface. And second, visual communication designers were asked to complete a task scenario in WordPress. Upon completion, they were then asked to complete a standard usability questionnaire about their experience and the results were scored.

**Chapter II: Usability**

Usability is defined as “how easy it is for user to learn a system, how efficiently they can use it once they have learned it, and how pleasant it is to use (Nielsen & Mack, 1994). The ultimate goal is for the user to have a valuable website experience and accomplish their goals as quickly and easily as possible. Usability is determining what a user wants from a site and the best way to deliver that to them. A typical user wants many things, including a site that is visually pleasing and functions so that any task can be completed. Also, the site must contain quality content, the information the user is seeking must be delivered in an understandable, digestible and interesting manner. Another important aspect of usability is making a site accessible to those with visual and other impairments.

Typically, when we talk about web usability we are talking about the front end of a website. If a website cannot be navigated quickly and easily, or the experience becomes negative in any way, users leave. The time an average user is on a given web page is just over a minute (Nielsen, 2013). If they get lost on the site, they leave. If it is not clear within the first few seconds of landing on a web page what the purpose is, what the company does or sells, users leave. With almost 650 million websites on the Internet (Netcraft, 2012), it is extremely unnecessary for a user to spend time feeling lost and
frustrated on a website when they can quickly access another site and efficiently complete their task. “The first law of e-commerce is that if users cannot find the product, they cannot buy it either” (Nielsen, 2012). Losing a client to the competition because of website usability can be death to a small business.

The goal of usability testing is to identify possible areas where users have difficulty accomplishing goals through the user interface. Once these areas have been identified, they can be addressed and fixed. Ideally, usability testing should be done at various stages throughout the project’s development, from conception to execution. It is a much more efficient approach than leaving the testing until the end of the project. It is easier to fix problems along the way than to have to go back and make major revisions once a project is almost complete.

This study looks at the usability of WordPress from the back end or administrative layer of a site. At the time of this study, WordPress has been fully launched, but problems can still be identified and addressed. The same metrics used for the front end apply to the back end; the interface must satisfy the needs of the user. This study identified the primary needs of the user as building and customizing a website, and there are several reasons a visual communication designer is motivated to seek a highly usable content management system. First and foremost, they want to deliver a quality product and ensure their client’s needs are met. Second, how efficiently the site can be built directly affects productivity. If the designer is not able to quickly accomplish a task or has to search for a solution, both productivity and profit drop. Whether it be a firm or a freelancer, time spent learning is less profitable than time spent working. Another reason is reliability, both the designer and their clients need a reliable product. The
better the experience, the more likely designers are to use it again and recommend it to their clients. This creates brand loyalty and positive marketing for WordPress and helps them maintain their market share. With over 60% of websites still not using content management there are many sites to convert from a static site to a content management site. There are also over fifty different CMS applications vying for more of a market share (W3Techs, 2014). Lastly, Joomla and Drupal, WordPress' current major competition, are both making efforts to address usability and smooth out their learning curves. Drupal announced a usability strategy in 2011 and has a very active community conducting studies (Rex, 2013).

**Chapter III: WordPress**

“A content management system (CMS) is a software application used to upload, edit, and manage content displayed on a website. A CMS can perform a variety of different tasks for a website including regulating when content is displayed, how many times the content is shown to a specific user, and managing how the content connects or interacts with other elements of the website. This software also enables less technical individuals to manage content on a website easily without having an extensive coding background.” (BusinessDictionary.com, n.d.). It should also be noted that a CMS is a dynamic system. While a typical web page is created by an HTML file, in a CMS these pages are stored in a database and the HTML is generated dynamically when the data is requested (Patel, Rathod, & Prajapati, 2011).

The capability of allowing a non-technical user to manage content attracts most clients to content management. With a small amount of training, content can be created and updated by the client, no longer employing an agency to make updates. And for this
reason, CMS popularity is consistently growing.

A CMS is now the preferred choice for those who want easy content changes, simplified control of large amounts of content, a choice of plug-ins to accomplish a wide variety of tasks; and above all, the ability to do a lot more, a lot easier, and a lot faster than with any other system” (Patel, Rathod, & Prajapati, 2011, p. 39).

WordPress is a free and open source content management system and blogging tool built by a community of developers and contributors (Techopedia.com, n.d.) It features a template framework of themes to provide a basic core website structure through already developed PHP and CSS files that are installed onto a web server. Themes have options that can be somewhat customized to change the look and feel of the website. Additional features or functionality can be added as needed through plugins. The content management allows clients to update the content without knowing any programming language or development code.

History of WordPress

WordPress was released in 2003 by Matt Mullenweg and Mike Little. It started as a fork of b2/cafelog, an early blogging platform. Open source is when the source code is made available and is licensed in such a way (General Public License) that it may be modified and redistributed by anyone. A fork is when source code is copied and independently developed. This General Public License and open source platform has allowed for a community of developers to continuously create updates and fix bugs,
build themes and plugins and contribute to a large discussion forum (McKeown, 2014).

There are proprietary content management systems that charge expensive licensing fees for their software. But because open source is free, without any licensing fees, it is popular and has gained traction in the market. And WordPress has the largest share of that open source market, while only about 36% of websites use a CMS, 60% of those use WordPress (Figure 1) (W3Techs, 2014). The CMS with the second biggest market share is Joomla with only 8.5% and in third place is Drupal with mere 5.3%. This puts WordPress in first place in the market share by a large margin.

In a March 2012 survey taken by the research data and analysis company Netcraft, there were 646 million websites currently on the Internet (Netcraft, 2012), which equates to almost 140 million websites currently using WordPress. And while it began as a platform for blog sites, its use for static sites is growing as well. Some sites that are currently built in WordPress include How Design (www.howdesign.com), The Rolling Stones (www.rollingstones.com) and Chef Mario Batali’s site (www.mariobatali.com) (Figure 2).
Popularity of WordPress

WordPress has maintained its strong lead in the market since at least 2008 (Water & Stone, 2008) (W3Techs 2014). But the top three are powerful, each with pros and cons and a best use. All three systems are open source, have a repository of themes and plugins (Joomla and Drupal have different terms for their technologies, but I will use WordPress terms to keep comparisons equal) and all three have active developer communities behind them. But WordPress has easily surpassed the other two in popularity. There are several reasons for this, and word of mouth is one. WordPress is searched on Google more than any other CMS (Google, 2014). Another reason, as its use for static websites is growing, WordPress is still used primarily for blog sites, making it popular for both business sites and personal sites. This enables bloggers already using WordPress for their personal blogs to transfer those skills to the workplace and update content on an employer's website. That becomes a factor for smaller businesses when they are choosing a CMS. My experience at a design firm reflects this; our typical client was a small business or non-profit organization interested in upgrading an existing site to a content management system. Our clients were interested in maintaining their own content because they did not have a budget to hire an agency to make frequent website updates. These businesses never had a full
time position dedicated to maintaining the website; it was always added to a currently existing job title. Employees needed to be able to maintain the website easily without a lot of time or experience to devote to the task.

Another consideration when choosing a CMS is credibility. If someone follows a popular blog that is built on WordPress, that adds to its credibility, and they are likely to choose WordPress then for their own (Mark, 2011). But perhaps the most important reason WordPress is so popular is the learning curve. Content management systems are extremely complicated applications and can be difficult to master. The reason a client chooses content management is so that as a non-technical user they can maintain their own content. But some administrative panels are more intuitive to non-technical users more than others. WordPress is widely considered as one of the easiest to learn for users to update content. (Mark, 2011). Udemy, an online learning platform that teaches courses in the top three, states that “Moving from WordPress to Drupal can feel like walking from your car into a Boeing 747 cockpit – everything is just so complicated!” and Joomla “can be enough to intimidate users” (Mikoluk, 2013).

How WordPress Works

There are a few layers to WordPress and the level of interactivity varies depending on the layer. The front end is the layer that visitors see and interact with, this is the actual website and it looks and functions just like any other website. Unless there are WordPress credits in the footer, you may not even know that a site is built on WordPress.

The back end of WordPress is the administrative layer. A user must be authorized with a valid username and password to access this layer. To log in to the administrative
area a /wp-admin must be added to the site URL in the browser; for example www.mariobatali.com/wp-admin (Figure 3). When the user enters this URL into the browser, they are taken to a Login Page where they are prompted for a user name and password. This is the non-technical access to the data layer and an administrative user can modify the content on the website through this layer as often as they choose. Content includes, but is not limited to, copy, images, video or audio and hyperlinks. Current pages can be modified or deleted and new pages can be added. When a new page is added, the administrative user can choose where that page appears on the site and update the navigation menu accordingly. It is common for users to control when a calendar event or blog post is displayed or archived on their site and these settings are also managed through the back end.

This flexibility allows the administrative user to efficiently maintain a site. As a business grows and changes, pages can be easily added, deleted, or reorganized within the site and easily accommodates site growth. For example, when the business establishes regular events, a calendar can be added. Many services can be accommodated including E-commerce. WordPress also easily incorporates Google Analytics, search engine optimization and other behind the scenes services as well.

When a user is logged in as an administrator, they see the Dashboard, the landing page of the administrative layer (Figure 4). The Dashboard is a summary that provides information about the site in different containers. The user can easily

Figure 3: URL for Logging into a WordPress Site
monitor posts or comments and schedule post displays or archives. The Dashboard’s appearance can be customized to better fit each users needs.

On the left side of the Admin panel is a sideboard containing a series of links in a navigation menu. It is through this sidebar navigation that site is managed. Content is added, such as a new page, post or event, or moderation post comments. Within this navigation menu is an Appearance tab and a Settings tab and this is where a non-technical user would make changes to the themes. Themes dictate the appearance of the site. They interact with the WordPress software, without changing it, to dictate how a site looks and functions. WordPress has a few simple default themes with installation,
but there are thousands of other themes available. These range in their simplicity, functionality and cost. Activating a theme will immediately apply that template's design and function to the site. Each theme is integrated with certain options that are usually limited to colors and font styling, but can also include some page layout options and styles for blog posts. A simple theme will have less options while a complex theme gives you much more control over these elements.

The Plugins tab is a way to expand the functionality of a website beyond what the theme possesses. Plugins are bits of PHP code that add a brand new feature or enhance an existing one. Both search engine optimization and Google Analytics would be added to your WordPress site through plugins. They are simple to install and activate, there is no need to know PHP. Of course customization is possible, and both the Appearance tab and the Plugins tab have an Editor link. Designers and developers can make edits to the PHP or CSS files here.

Finally, there is a third data or content management layer that is executed on the server. This layer is not an area non-technical users would access. WordPress works like any other open source, content management system on a PHP platform. To open the website www.mariobatali.com in your web browser, for example, a request gets sent to the web server that is hosting the site. A web server describes two things. First, it refers to the hardware (the computer) where the site lives. But it also refers to the software that serves up the web files. The most commonly used web server software is Apache. The Apache web server then searches for the files on the hard drive. If the site is a WordPress site, this includes all the WordPress files that were installed when the site was built. These are mostly PHP files and one or more CSS files. PHP
is a very popular server side scripting language commonly used for web development and can easily be embedded into HTML. When Apache finds the files, it sends them to the PHP processor module, which interprets and executes the code. SAPI (Server Application Programming Interface) is one PHP processor module that interprets or executes PHP for Apache. Part of this execution includes retrieving any data from the database. A database is a software program that efficiently stores large quantities of data. A commonly used database program used with WordPress and Apache is MySQL and it gets installed on the web host computer along with everything else. The data from the database is the actual content of the site. The PHP code within the theme files dynamically generates the HTML that the browser reads and controls the structure and the layout of the website. The rest of the PHP files create the back end WordPress content management application. The PHP processor module sends all of those results back to the Apache web server and Apache sends that data back to the browser. The browser then displays the content and you see web site (Figure 5).
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Whether visual communication designer or developer, the approach to customizing a content management system is the same. Customization takes place

Figure 5: How WordPress Works

How to Customize WordPress

Apache web server finds the files on the hard drive and sends to PHP processor module
PHP processor module interpretes files, executes the code and
Retrieves data from the MySQL database
Results get sent back to Apache
Apache sends data back to the browser in the form of a website
through the data layer. Figure 6 shows the three layers WordPress.

Typically, modifying the structure or layout of the site requires modifying the HTML. In a CMS, there are no HTML files, it is generated dynamically through the PHP, so modifications need to be made to those PHP files. These are located within the theme folder where specific PHP files control specific areas of the site. For example,

![Layer 1: Front End][1]

![Layer 2: Back End][2]

![Layer 3: Data Layer][3]

Figure 6: Layers of WordPress

header.php controls what goes in the page header. Themes provide the look and functionality of a site without altering the WordPress content management software.

Every installation of WordPress comes with at least one default theme but there are many others that can be installed. Themes must be activated after being installed to tell WordPress what set of PHP files to use. Themes can be switched (simply activating is different set of PHP files) or customized (modifying the existing PHP files).
All themes contain some basic options to change the appearance, but any changes beyond those must be done through the CSS. Every theme will have a main stylesheet called style.css and more complicated themes may have additional stylesheets that link to the main file. Even the most basic WordPress themes can contain a few thousand line of code within a single stylesheet, and this can make locating the code that affects a specific element a challenge. One common approach is to, through a browser window, inspect the element to be modified. Highlighting an element through the inspector shows what code is modifying that element. It also indicates where and how the CSS was written in the stylesheet, information that is needed to modify the CSS.

Often, customization requires modifying a combination of both the PHP and CSS files. Best practices for this are to first create a child theme. This is a theme that will inherit the functionality and design of the main (parent) theme but the child overrides the parent with new code. The biggest advantage of a child is it enables themes to be changed without making any permanent changes to the parent. A child can be made from any WordPress theme. Inside every child theme folder is a second stylesheet also called style.css. This is a new stylesheet with special comments at the top section of the document to tell WordPress that the child theme folder has a parent and also contains a line of code to import the parent’s styles. This is the only file needed to create a child theme, but usually a functions.php file is also created. This is where the PHP functions within the theme are located. Unlike the stylesheet, this file gets loaded in addition to the parent’s functions.php and does not override it. Any other theme file that needs to be modified should be copied and saved in the child theme, where all of
the edits are made. For example, to modify the header.php file, a copy would be made and placed into the child theme folder. Figure 7 shows the data layer file structure of the twentyfourteen theme, the most recent default theme from WordPress. A child theme was made with a functions.php and a style.css inside. The twentyfourteen parent folder is expanded showing the PHP files that control the structure and layout for that theme.

These are the files that dynamically generate the HTML. More complicated themes will contain even more files. Part of learning how to customize the files is learning the hierarchy and what file controls what parts of the site. For example, there are two files in the twentyfourteen theme, one named sidebar-content.php and the other sidebar.php. Sidebar.php controls the left sidebar, which by default appears on every page. Sidebar-
content.php only executes if a the user adds a widget to the Content Sidebar area in the Dashboard. But footer.php and sidebar-footer.php both work together, one will not work if it cannot execute functions in another.

It was important to know how WordPress works, the function of each layer, and how a typical project is approached to develop a practical usability study.

Chapter IV: Research Methodology

Usability Testing Methods

The purpose of this study is to identify usability issues for visual communication designers in the back end interface of WordPress. There was no usability testing done on the front end, or the actual website. Since WordPress has been operating for ten years, all the testing was done on a fully launched application. Two methods were used, first, a Heuristic Walkthrough was completed on the WordPress Dashboard. Next, research participants were recruited to complete a task scenario and were then asked to take a usability questionnaire rating that experience.

Heuristic Walkthrough

A heuristic walkthrough combines three usability inspection methods; heuristic evaluation, cognitive walkthrough and usability walkthrough. A usability inspection is “the generic term for a set of methods based on having evaluators inspect or examine usability-related aspects of a user interface” (Nielsen & Mack, 1994, p1). A heuristic evaluation is an informal inspection method where the evaluator assesses an interface by a set of established usability principles. These principles are referred to as heuristics. A cognitive walkthrough is a usability inspection method that evaluates a design based on
ease of learning. This method assumes the user prefers to learn software by exploration instead of formal training. It simulates a user’s problem-solving process (Nielsen & Mack, 1994). Finally a usability walkthrough was developed by Karat et al. in 1992 and is a two-step process. Step 1 is similar to a heuristic evaluation; it is a self-guided exploration and in Step 2 the evaluator completes a set of task scenarios (Sears, 1997).

The heuristic walkthrough is also a two-step process. In the first pass, the evaluator walks through the user interface and performs a prioritized set of user tasks. On the second pass the evaluator explores the interface based on a set of usability heuristics. The evaluator documents problems in both passes and assigns severity ratings (Sears, 1997). One typical scale would rate the severity of usability problems between 0 and 4 where 0 = I don’t agree that this is a usability problem at all, 1 = Cosmetic problem only: need not be fixed unless extra time is available on project, 2 = Minor usability problem: fixing this should be given low priority, 3 = Major usability problem: important to fix, so should be given high priority, and 4 = Usability catastrophe: imperative to fix this before product can be released (Nielsen, 1995).

The author acted as evaluator and conducted both parts in the heuristic walkthrough. I am a visual communication designer and intermediate developer. I can code HTML/CSS from scratch and have built a static websites from scratch. I have experience building websites in WordPress (less than 5) and am self-taught through tutorials and online communities.

Each task in Step 1 was performed and the action sequence to complete the task, the system response, and any usability issues were recorded. In Step 2, an overall walkthrough of the interface was conducted using the CMS specific heuristics and
documenting usability problems. The tasks in Step 1 are reasonable and representative of what most users want to accomplish and were compiled by my own WordPress knowledge and the consensus of several blog posts containing their own checklists of WordPress best practices. This list was not assembled from any information found on the WordPress Codex. WordPress defines its codex as “the online manual for WordPress and a living repository for WordPress information and documentation” (n.d.). But this documentation does not readily include a checklist of best practices or first steps to take. Some of these tasks, like changing the home page to a static page will affect the functionality of the entire site.

The user must be logged in as an Administrator and all of these tasks can be completed through the Dashboard page on the back end layer. None of these tasks require directly modifying any of the code files, or accessing the data layer so they would not be considered customization. These are typical options or settings available in any WordPress theme.

In Step 2, a set of content management system specific heuristics based on Jakob Nielsen’s original heuristics was used (Bos et al., 2005). These heuristics, listed below, were used to evaluate the WordPress back end layer performing tasks in the Dashboard. A general evaluation of the interface was then conducted based on these heuristics (Zaphiris & Kurniaway, 2007).
Study Design

**Step 1: User tasks.** The evaluator performed all ten common tasks through the Dashboard in WordPress 3.8.2.

1. **Change the site title and tagline.** The site title is a title tag that defines the page in a browser tab but does not appear on the page. The tagline is a short phrase used to describe the site and can be displayed on the page.

2. **Change home page to a static page.** By default, WordPress shows the most recent blog posts as the home page. Changing to a static page would display the same home page every time.

3. **Define general permalink structure (pretty URLs).** By default the link structure is non-descriptive and contains numbers and punctuation. This is not understood by search engines and can be optimized through built-in settings.

4. **Delete “Hello World” post.** Every WordPress site has default sample content that can be deleted. This is a sample blog post.

5. **Delete “sample” page.** More default sample content that can be deleted. This is a sample page.

6. **Add a new page.** This adds a new page to the website.

7. **Set up a navigation menu.** Setting up a menu allows the user to control the website’s navigation.

8. **Delete default plugins.** More default sample content that can be deleted.

9. **Add header image.** Adds an image to the site that is visible at the top of every page.
10. **Add favicon.** A favicon is a small icon that is displayed in a browser’s address bar or next to the site name in a bookmark list.

**Step 2: Interface Walkthrough**

A general walkthrough of the interface was evaluated based on these CMS specific heuristics.

1. **Visibility of system status.** The system should always keep the user informed about what is going on, providing feedback about the fulfillment of every action (users should not have to rely on the browser’s status and progress bar).

   Provide real-time status indicators when executing actions. Feedback messages should state (1) what the computer has done and (2) whether it was successful. Options that are unavailable at that time or on the selected object should be greyed out. Indicate the progress throughout a task (e.g., “step 4 of 6”) whenever appropriate.

2: **Match between system and real world.** The systems should speak the user’s language. Follow real-world conventions, making information appear in a natural and logical order. Data flows should support and follow the user’s task flows and goals. Menus should be organized in a logical way, and be phrased as commands to the computer.

3: **Consistency.** Be consistent through all aspects of the interface; the user should not have to wonder whether different words, situations, or actions mean the same thing.

4: **Recognition rather than recall.** Objects, actions, and options should be
visible. The user should not have to remember information from one part of the
dialogue to another. Default values should be used whenever a likely default
value can be defined. Hyperlinks and controls should be easy to distinguish.

5: Flexibility and efficiency of use. Accelerators –unseen by novice users–
should be used to speed up the interaction for the expert user. Industry-standard
shortcuts should be used. Consider implementing direct manipulation/drag and
drop functionality and context-menus wherever a user might expect this. Provide
the possibility to edit in WYSIWYG-mode whenever possible and appropriate. Make
sure the web application loads quickly enough to keep response time acceptable.

6: Aesthetic and minimalist design. Dialogues should not contain irrelevant
or rarely needed information. Limit the use of windows, but use pop-ups when
appropriate. Overuse of features could cause a decrease of usability. When
appropriate, complicated dialogues should be hidden from casual users by
providing a “beginner” and “expert” version of the interface. If a display contains
too much information, partition it into separate displays.

7: Error prevention and recovery. Provide the user with an “emergency exit” to
leave any unwanted state.

Support undo and redo for every action. Allow users to revert to
previous versions of pages/data. Error messages should be expressed in plain
language (no code; hide technical information), precisely indicate the problem,
and constructively suggest a solution. Protect users from actions with drastic
consequences (ask for confirmation). Provide feedback on invalid input and
suggest subsequent actions. Do not let users execute actions that lead to errors.
8: **Provide help and instructions.** Provide online and context-sensitive help. Rather integrate instructions into the application (e.g., through the use of labels or tooltips) than relying on help and documentation. Descriptive instructions, labels, and tooltips should be available whenever appropriate.

9: **Conformance to other applications.** The system should be consistent with other applications (both desktop and web applications) and not contain conflicting elements. Industry standard controls and task flows should be used. When controls are copied from desktop applications, they should work in the same way as they do in the desktop application (and include all its features). If necessary to overcome the browser’s shortcomings, use plug-ins.

10: **Follow web application conventions.** Avoid the use of double clicks. Use roll-overs to display additional data in order to reduce screen clutter, but never hide primary controls or content. Use standard web controls (i.e., radio buttons, checkboxes, etc.) and flows (e.g., the deletion of elements from a list). When using text as a hyperlink, underline it.

11: **Browser controls and navigation.** The use of the browser’s controls (e.g., the back button) or (accidentally) closing the browser should not result in data loss (save changes when appropriate). Make a clear distinction between the browser’s and the web application’s menus and controls. If the browser is not opened full-screen, the browser’s controls should not cause errors or confusion.

12: **Allow easy data entry that minimizes the chance of errors.** Various types of input should be recognized (e.g., “1”, “Jan”, and “January” for January, “555-
5555" and “5555555” for telephone numbers, etc.). Provide easy means for the entry of restricted data (e.g., a calendar view for the input of dates, a color picker for the selection of colors, etc.).

Data Collection

Screenshots were taken to record the action sequence required to complete each of the tasks, this includes the interface response to the action. For example, if an attempt to delete an item prompts a button asking the user if they are sure they want to delete, this is an interface response and was recorded. Please refer to Appendix 1 for the screenshots for tasks 1-10.

No specific tasks were performed in Step 2. The evaluator started at the Dashboard, logged into WordPress as an administrative user. The evaluator slowly navigated through the Dashboard looking at every element and its action and comparing that back to the CMS heuristic.

Task Scenario Usability Test

The heuristic walkthrough was only one method to test usability. The other was an observational study to determine the usability satisfaction of WordPress for visual communication designers working in the back end administrative layer. Each participant was asked to complete the same task scenario. They were asked to build a home page design of a mockup that was created in Photoshop, recreating it as closely as possible to the specifications in the PSD (Figure 8). The page did not need to function, just visually match.
The home page design includes a navigation menu at the top of the page and a main image. Below the image is a short paragraph of text using a web font (not a standard systems font). Next are 3 columns of images that link to interior pages. The first column highlights places to stay, the second, things to do and the third column highlights local nightlife and an event calendar. The footer contains contact information, links to social media and a form field to sign up for newsletter.

Research participants were recruited via email (Appendix 2) and asked to complete a short survey of questions to determine if they fell within the participant criteria for the study (Appendix 3). Questions either required a “yes” or “no” response or had a number value between 1 and 7 on a Likert scale, with 1 being least, 7 being most and 0 for none at all. A Likert scale is a way to assign a quantitative value to qualitative data. A value is assigned to each response to enable analysis of the data. The higher the overall score the more of a web expert they
considered themselves.

The goal was to recruit participants that had at least an intermediate knowledge of web design and development. Familiarity with designing for a CMS or familiarity with WordPress was not essential. Minimum eligibility required a response of “Yes" to questions 1 and 2 and questions 4 and 5 had to have a value of 3 or higher. If these criteria were not met, the candidate was not asked to participate in the usability study (Table 1).

Table 1: Research Participants Recruitment Scores

<table>
<thead>
<tr>
<th>Questions</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you make a living as a graphic designer?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>2. Do you regularly design websites?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>3. Do you consider yourself a developer?</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>4. Rate your knowledge of HTML</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5. Rate your knowledge of CSS</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>6. Rate your familiarity of designing for a content management system?</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>7. Rate your familiarity with using WordPress</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total score</td>
<td>19</td>
<td>17</td>
<td>8</td>
<td>15</td>
<td>11</td>
<td>25</td>
</tr>
</tbody>
</table>

1 being least, 7 being most, 0 for none at all

Study Design

At the start of each session, the task procedures were explained to each participant and informed consent was obtained (Appendix 4). Each participant was given two hours to complete the task, to build a non-functioning home page design in WordPress. There were no restrictions or guidelines for achieving the task as long as
WordPress was used. There were no specific themes or plugins that were required. This task was completed by the researcher before it was given to any of the participants. I started with the twentyfourteen default theme (Figure 9) and installed two plugins; one for the typeface (Google Fonts) and one to create the newsletter form field (Contact Form 7). This information was provided to the participants and they were free to use those same plugins, use their own, or none at all. Each participant was asked to approach the task as they would any WordPress project. They were encouraged to use any themes, resources, etc. that they were already familiar with or felt most comfortable with. Any means of troubleshooting needed to complete the task was valid, including searching forums on the Internet although no books or manuals were available to the participants.

Each participant worked from the same laptop on a locally installed instance of WordPress 3.8.2. Each participant started from a fresh installation and a new database. Only the default WordPress templates (twentytwelve, twentythirteen and twentyfourteen) were installed to start, and only the default Plugins (Hello Dolly and askimet). All of the required images were optimized and loaded into the WordPress media library ahead of time for convenience.

The Photoshop PSD file was open on the laptop for reference and a color printout of the design was provided as well. The printout provided notes that included
pixel dimensions, hexadecimal codes, and typefaces and sizes to provide all the information about the page design the participant needed to build the page. Text Wrangler was available if the participant wanted to use a text editor and participants had the choice of working in Firefox or Chrome as their web browser.

As each participant worked to build the page, the researcher observed and took notes. They each worked until they felt they could no longer make progress or hit the two-hour time limit, whichever came first. It was not an expectation that the entire home page would be built within the two hours. The time limit was in place to respect the participants and their donation of time and effort. They were not compensated in any way so it seemed unreasonable to ask that they worked until the task was completed. When the participants were finished, screenshots were taken to document each participant’s progress (Appendix 8-13).

**Data Collection**

Upon completion of the task, participants were asked to take a usability questionnaire about their experience. The objective was to gain insight into the overall experience of working in WordPress, not the progress made on the task.

A total of fifty-eight emails were sent to visual communication designers in the Northeast Ohio area. These were gathered from my personal connections that included graduate students in Visual Communication Design at Kent State University, LinkedIn connections and personal friends and colleagues. There were twelve that responded to the recruitment survey and seven that were eligible candidates and participated in the study. There were errors with one candidates’ survey, and her results were not included.
in the final data.

The six participants that completed the task were given the PSSUQ (Post-study System Usability Questionnaire) after they finished the home page (Appendix 5) (Sauro & Lewis, 2012). The PSSUQ is a 16-item usability questionnaire designed to be administered immediately following a task-based usability test. This study is designed to access a participants “perceived satisfaction” with the application. Scoring is broken down into categories: Overall, System Quality (SysQual), Information Quality (InfoQual) and Interface Quality (IntQual). A set of questions is assigned to each category and the scores are averaged. SysQual is the average of questions 1 through 6, InfoQual 7 through 12 and IntQual 13 through 15 and the Overall score is the average of questions 1 through 16.

Each item is measured on a 7-point Likert scale and participants responded to each question by choosing a value between 1 (Strongly agree) and 7 (Strongly disagree). A lower values equates to a higher degree of satisfaction or overall user rating and a higher score equated to a lower degree of satisfaction (Table 2). The PSSUQ was chosen for this study because it, unlike other questionnaires, does not require a license fee, but also because it works well for studies that test software that has already been launched as opposed to earlier in the development process.
### Table 2: PSSUQ Values and Mean

<table>
<thead>
<tr>
<th>Questions</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, I am satisfied with how easy it is to use this system.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6.00</td>
</tr>
<tr>
<td>2. It was simple to use this system.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6.00</td>
</tr>
<tr>
<td>3. I was able to complete the tasks and scenarios quickly using this system.</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5.50</td>
</tr>
<tr>
<td>4. I felt comfortable using this system.</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5.67</td>
</tr>
<tr>
<td>5. It was easy to learn to use this system.</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>5.83</td>
</tr>
<tr>
<td>6. I believe I could become productive quickly using this system.</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>4.33</td>
</tr>
<tr>
<td>7. The system gave error messages that clearly told me how to fix problems.</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>5.83</td>
</tr>
<tr>
<td>8. Whenever I made a mistake using the system, I could recover easily and quickly.</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>3.67</td>
</tr>
<tr>
<td>9. The information (such as on-line help, on-screen messages and other documentation) provided with this system was clear.</td>
<td>4</td>
<td>2</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5.50</td>
</tr>
<tr>
<td>10. It was easy to find the information I needed.</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>5.50</td>
</tr>
<tr>
<td>11. The information provided for the system was easy to understand.</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>5.00</td>
</tr>
<tr>
<td>12. The organization of information on the system screens was clear.</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5.00</td>
</tr>
<tr>
<td>13. The interface of this system was pleasant.</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>4.33</td>
</tr>
<tr>
<td>14. I liked using the interface of this system.</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>5.33</td>
</tr>
<tr>
<td>15. This system has all the functions and capabilities I expect it to have.</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>4.83</td>
</tr>
<tr>
<td>16. Overall, I am satisfied with this system.</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5.17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SysUse (average of items 1-6)</td>
<td>5.56</td>
</tr>
<tr>
<td>InfoQual (average of items 7-12)</td>
<td>5.08</td>
</tr>
<tr>
<td>InfQual (average of items 13-15)</td>
<td>4.83</td>
</tr>
<tr>
<td>Overall (average of items 1-16)</td>
<td>5.22</td>
</tr>
</tbody>
</table>
Chapter V: Results

Heuristic Walkthrough

The results were recorded by taking a screenshot (Appendix 1) at each step in the task. System responses were captured as well.

**Step 1: User tasks.** Each task was chosen because it represented a task that would be completed in the beginning processes of building a WordPress site. The only task the evaluator considered to be intuitive without any usability issues to note was Task 3. The rest of the tasks each had small usability issues that would impact the user. The Customization page did not resemble other pages in the Dashboard, for example. The appearance of the navigation changed on this page as well as the location of the buttons. There was no page header to indicate where the user was within the site. There was also no notification when a task was completed, which is consistent with all other pages in the Dashboard.

The Header page would also be confusing for a first time user. There is no Cancel or Back button of any kind, which is inconsistent with other applications. It is not clear that the theme actually has more control over the image than the user. The theme will control the dimensions and placement of the image and will vary in every theme. It is unclear where the header text comes from when the “Show header text with your image.” checkbox is selected.

A favicon was added to the site through a plugin. The steps to install and activate a plugin were intuitive and consistent. But once a plugin is activated that consistency can end. For example, where they appear in the Dashboard is not consistent. Each
plugin will look and function differently because many developers contribute to the WordPress community. The following are the action sequences for the task, the system response and the evaluator findings.

**Task 1: Change the site title and tagline**

*System Response:* The user stays on the Customization page after clicking save. 

  Clicking the Close button navigates back to the Dashboard.

*Comments/Findings:* The Save button is at the top of the Customization page. It is at the bottom or near the bottom on all other pages in the Dashboard. 

  There is no notification that changes were successfully made. 

  The only visual cue is the Saved button becomes unclickable.

**Task 2: Change home page to a static page**

*System Response:* After clicking the Save button the user stays on the page. The Close button navigates back to the Dashboard.

*Comments/Findings:* The Save button is at the top of the page. It is at or near the bottom on all other pages in the Dashboard.

  There is no notification that changes were successfully made. The only visual cue is the Save button becomes unclickable. There are no instructions to indicate that when you create a static front page you must also create a way for WordPress to show the most recent posts in a “virtual directory” by choosing a Posts page whether or not you are actually using Posts. There were no directions to indicate the difference between
a home page and a static home page or when to use what.

Task 3: Set up permalinks / pretty URLs

*System Response:* The user navigates to the Permalink Settings page. When the Save Changes button is clicked, the user is notified that settings were updated. The user remains on the Permalink Settings page.

*Comments/Findings:* This is a typical response to an actions sequence in WordPress. No major usability issues are noted.

Task 4: Delete “Hello World” post

*System Response:* Rolling over the post title produces a set of action links; Edit, Quick Edit, Trash or View. When the Trash link is selected, a tool tip indicates the action. Once the post is deleted a notification at the top of the page indicates the task is complete.

*Comments/Findings:* There was no “are you sure you want to delete this?” prompt before deleting the page. However, the notification at the top of the page once the task is completed does contain a link to undo the task.

Task 5: Delete “Sample” page

*System Response:* Rolling over the page title produces a set of action links; Edit, Quick Edit, Trash or View. When the trash link is selected, a tool tip indicates the action. Once the page is deleted a notification at the top of the page indicates the task is complete.

*Comments/Findings:* There was no “are you sure you want to delete this?” prompt before deleting the page. However, the notification at the top of the page once the task is completed does contain a link to undo the task.
Task 6: Add a new page

**System Response:** The Add New button navigates to the Add New page. User is prompted to add the page title in the form field. User can then add content to the page. Upon selecting the Publish button, the system navigates the user to the Edit page.

**Comments/Findings:** The differences between the New page and Edit page are very subtle. There is a notification to indicate a page was published, and the page title changes. The Edit page button also changes from Publish to Update. When the Update button is selected, the user remains on the page and the notification at the top indicates that the page has been updated.

Task 7: Set up a menu

**System Response:** When you add the selected pages to the menu, they appear under the Menu Structure. When the user Saves Menu, a notification appears at the top of the page to indicate the menu has been updated.

**Comments/Findings:** This page is too minimal. There is not enough basic information to guide the user through the action sequence required.

Task 8: Delete default plugins

**System Response:** The Plugins link navigates to the Plugins page. When the Delete link is selected, the user is directed to a page that provides a prompt to make sure the user is sure they want to delete. The next action (yes or no) returns the user to the Plugins page. If
the plugin was deleted the user sees a notification to indicate the plugin was deleted.

Comments/Findings: There is no alert to prompt the user that a plugin has to be deactivated before it is deleted. Plugins are color-coded, but there is no legend to show the user what the colors indicate. The action sequence to delete a plugin is not consistent with the action sequences to delete a page or a post.

Task 9: Add a header image

System Response: Choosing an image and selecting the Set as Header button navigates the user to the Crop Header Image page. The user can choose to crop and publish the image or just publish the image as is by selecting the corresponding button. The user is then returned to the Custom Header page and sees a notification that the header has been updated. The user then selects the Save Changes button and remains on the Custom Header page.

Comments/Findings: There is no Cancel button of any kind. You can also upload images from the local computer through the media library. This makes the “Choose and image from your computer” redundant.

The Crop and Publish button is sometimes irrelevant. The theme ultimately controls the size of the header image. If the user tries to publish an image larger than the theme dictates, the image is cropped anyway. The user has no control over this and there are no prompts to alert the user to this. Conversely, if the user
crops the image smaller than the theme’s header dimensions, the image will be disproportionately stretched and pixelate.

**Task 10: Add favicon**

*System Response:* Selecting the Add New button from the Plugins page navigates to the Install Plugins page and presents the user with a form field to enter a search term. The user can search for a plugin by an exact name or a general term. When the Search Plugins button is clicked, the search results are displayed on the Install Plugins page. The user chooses the plugin they would like to install by selecting the Install Now link. This link gives a notification that the plugin has been downloaded and a choice to activate the plugin or return to the Install Plugins page. The user selects the Settings link on the All in one Favicon plugin. This navigates to the All in one Favicon Settings page. Saving Changes produces a notification to let the user know settings have been updated.

*Comments/Findings:* The procedure for activating a plugin is always the same. But the action sequence to perform the task the plugin provides will not be consistent. It will vary depending on the purpose of the plugin and the developer that wrote the code for it.

Also, as they provide different functionalities, the settings and actions within each plugin will be different.

**Step 2: Interface walkthrough.** A heuristic walkthrough is an evaluation of the interface
conducted on the WordPress Dashboard. Usability problems will be identified based on violation of a CMS specific heuristic. If a problem violated more than one heuristic, it will be listed under each heuristic that it caused a problem.

**Heuristic 1: Visibility of system status**

*Comments/Findings:* There is really no place where the user drills down more than one or two pages deep, so a true breadcrumb is unnecessary. Notifications about the completion of actions were not visually impactful and easy to overlook.

**Heuristic 2: Match between system and real world**

*Comments/Findings:* The language is an issue. The terminology is a very programmer based terminology. Many terms are not common to non-technical users. A glossary is provided on the WordPress Codex, but it is cumbersome. There are no anchor links to help the user quickly move through the long list of terms. The meaning of Post gets confusing because it can mean multiple things.

**Heuristic 3: Consistency**

*Comments/Findings:* There are many inconsistencies throughout the Dashboard. Sometimes a button says “Save”, sometimes “Publish or Update” and sometimes just “Publish.” Also, the term post can have different meanings. The Customization page does not have any of the same elements as the rest of the pages. It loses the main Dashboard navigation, and instead there is a menu that is expanded with carrots. The buttons are at the top of the page; they
appear at the bottom on all of the other pages. There is no page title at the top of the page. The notification of a completed task that appears at the top of every other page is missing.

**Heuristic 4: Recognition rather than recall**

*Comments/Findings:* It is not easily recognizable what functions are controlled by the theme and what a user can actually customize. There is no consistency because themes will control functions differently depending on the complexity of the theme. It is also difficult to recognize where a widget is applied. The Header page is a good example of this. Although you can upload and crop a header image, most themes will override this functionality.

**Heuristic 5: Flexibility and efficiency of use**

*Comments/Findings:* WordPress is no longer used primarily to build blog sites; it is also frequently used to create static websites that do not contain blog posts but still needs content updated regularly. Yet, the default templates create a blog site. The steps required to switch the site to a static site are inefficient. It would be more efficient for all users to choose in one step what kind of site they want to build rather than the several steps needed to convert for just those wanting a static site.

**Heuristic 6: Aesthetic and minimalist design**

*Comments/Findings:* Some of the pages look too much alike. Many of the visual cues are too subtle and can make the user feel lost or disoriented in
the site. One example is the New page and Edit page. Also, the notifications are very small. If they are important they should have more visual impact.

On the Menu page, it is not clear what steps the user needs to take. The Menu Structure section is to the right of the Pages Section, yet this is where the user begins. Since we read left to right, the most left section would be the logical starting point.

Also the Menu Structure directions say to add menu items from the column on the left, but it does not indicate how to achieve that. It might not be intuitive to every user that they need to select the checkbox of the page to add it to the Menu Structure area.

Once pages are added to Menu Structure area, the directions are clear to arrange the page order. But it is not intuitive one page can be nested underneath another to create a secondary pages.

Heuristic 7: Error prevention and recovery

Comments/Findings: There is not always an “are you sure you want to delete” confirmation box for actions.

Heuristic 8: Provide help and instructions

Comments/Findings: There could be more explicit instructions on many of the pages, often there are none. The official WordPress Codex is authored to a developer audience. It is often difficult to find answers in lay terminology that is easy to understand. It is usually more fruitful to
do an Internet search for a blog post that answers your question in an approachable way. Also, the Codex does not give a checklist of best practices.

  Tooltips are not consistent and should include what the action does and where it displays on the site.

**Heuristic 9: Conformance to other applications**

*Comments/Findings:* There is no “are you sure you want to delete this” alert. When some tasks were completed and undo link was offered. This is not consistent with other applications.

**Heuristic 10: Follow web application conventions**

*Comments/Findings:* Adding a Post from the Dashboard creates a different post type than it does to add a post by navigating to the Posts page. This is not clear when performing either actions, or what the difference between the two is. Also, comments in the pages editor do not display on the site.

**Heuristic 11: Browser controls and navigation**

*Comments/Findings:* When editing in the Dashboard editor, the delete key is a browser shortcut for back page. If your text has not been saved, the content is lost.

  When a plugin is added sometimes is remains solely under the Plugins link, but sometimes it gets added to the Dashboard navigation. It is unclear when that happens, and depends on how
the plugin was developed.

**Heuristic 12: Allow easy data entry that minimizes the chance of errors**

*Comments/Findings: None*

**Task Scenario Usability Test**

The PSSUQ consists of an overall satisfaction scale and three sub scales: system usefulness (items 1–6); information quality (items 7–12); and interface quality (items 13–15) and overall usefulness (items 1-16). Participants rated system usefulness 5.56, information quality 5.08, interface quality 4.83 and overall usefulness 5.22. (Table 3). This scores show an overall perception of a general lack of ease of use of the system.

<table>
<thead>
<tr>
<th>System Usefulness</th>
<th>Information Quality</th>
<th>Interface Quality</th>
<th>Overall Usefulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.56</td>
<td>5.08</td>
<td>4.83</td>
<td>5.22</td>
</tr>
</tbody>
</table>

No two participants approached the task the same and they all yielded different final results. Participant #1 worked for 1 hr 15 mins before he hit his knowledge wall. It had been over year since the participant had worked in WordPress so he felt like he had to take a few minutes to refresh his memory with the Dashboard. The participant started with the twentyfourteen default template (Figure 9) and did make some modifications. His final result can be seen in Figure 10. He inserted the main image and the short paragraph that goes beneath, although it is a system font. One column of images under a subhead
of “places to stay” has been inserted. Much of the formatting is being dictated by the twentyfourteen theme, such as page width, menu color and the left sidebar.

Participant #2 first looked on the Internet for an existing theme that more closely resembles the home page design. He spent about 15 mins on the website ThemeForest, was not able to quickly find a theme, so he activated the twentytwelve default theme (Appendix 6). Participant is an advanced web designer and made more progress in the two hours than many of the other participants (Appendix 8).

Just like Participant #2, the first thing Participant #3 did was a Google search for a three column theme. He downloaded Pinboard Free WordPress Theme from One Designs (Appendix 7). This was a robust theme with more options for configuration than a default WordPress theme. He was able to implement many of the design elements from the theme options through the Dashboard without modifying the CSS. This theme was a good choice, he got farther faster than any of the first five participants. His final result (Appendix 10) took less than an hour.

Participants #4 and #5 both became frustrated very quickly. Neither made significant progress and both reached the limit of what they could accomplish in less than an hour (Appendix 11 & 12).
The last participant was the most familiar with WordPress. Most of his client business is web and he regularly build websites in WordPress. He made progress very quickly, but he ran into issues with the media. Inserting images destroyed all of the code for his `<h4>` header tags and he stated he felt this is a common WordPress issue. His final result was the closest to the original PSD (Appendix 13).

**Chapter VI: Discussion**

**Data Analysis**
The Heuristic Walkthrough revealed usability problems in almost every user task, and eleven out of twelve heuristics had a violation. This shows that even though WordPress is considered one of the easiest CMSs to learn, the Dashboard interface does indeed have some issues that need to be addressed and fixed. At this point the problems would be rated by their severity and frequency by each evaluator. The mean would be determined to access the relative severity of each usability problem. These ratings are useful when determining how to address prioritize each issue. Nielsen states that severity ratings assigned by only one evaluator are too unreliable, so they were not included in this study (Nielsen, 1995). Based on the evaluators experience and general knowledge, my determination would be that the usability issues uncovered in the Heuristic Walkthrough are minimal to moderate in impact. These issues are likely to cause the user irritation at the very least and perhaps delay the user significantly at the very most. It is not likely these would keep a user from completing a task. This is a subjective observation, it is possible another evaluator would disagree with these findings.
When the results from the PSSUQ Usability tests, which charted the users overall experience, are compared to the results of the Heuristic Walkthrough, this is consistent. The research participants gave the interface a 4.83 mean score on a seven point scale, which means they considered their experience interacting with the interface slightly less than average. A lower mean score would indicate a higher degree of satisfaction.

The scores for the other three sub scales were significantly higher, suggesting an overall less pleasant experience for the research participants in system usefulness, information quality and overall system usefulness. This would indicate severe frustration, possible loss of data or failure to complete tasks. This would concur with my observations as the research participants moved through the task scenario. Research Participant #5 was extremely frustrated and accomplished very little in the forty-four minutes she worked (Figure 11). She gave up when she could not make progress. Each research participant was asked what their overall impression of WordPress was, this participant’s response was “Hate it!” See Appendix 14 for the field notes taken for each research participant and Appendices 8-13 for screenshots of task scenarios.

The results of the PSSUQ would indicate that there are severe usability problems, just not with the interface. This study disproved the hypothesis stated earlier, but it did reveal other findings. All of the research participants felt frustrated at
some point in the task scenario, the levels ranging from mild to extreme. There are several other causes for this in addition to the interface. The reality is WordPress is an extremely complex software application, and as such, has a learning curve. The difficulties and frustrations can be broken down into seven areas; usability, themes, plugins, terminology, documentation resources, complexity and coding knowledge (Figure 12).

The first area is themes. The WordPress theme is essentially the skin of the website; it is a set of files that provides the look and functionality of website. There are literally thousands of themes to choose from. They are easy to install and activate, with the click of the mouse the appearance of the website will change. It could be argued that there is too much choice. It is difficult to choose a well-written theme. There is a rating system, but that is based on user opinion not quality metrics so word of mouth is the best way to determine the quality of a theme. The code needs to be written well so that the theme functions like it should. It needs to be updated regularly and any bugs should be fixed. And even then, updates can break a site. Most designers do not want to force a custom design for a client into an existing layout, that either means searching the Internet for a theme that closely matches the design layout or customization. Any customization
requires the modification of the PHP and CSS files. While some changes can be made without an extensive knowledge of PHP, full customization cannot. Participants in this study modified very little PHP code. It was more common that they did modified the CSS to varying degrees.

The second area of frustration is plugins. A WordPress plugin is designed to work with themes and provide extra functionality. Many times these work behind the scenes and do not interface with the public in a visible way on the site. A widget is a plugin that does interface with the public on the site. In other words, it displays something that the public can see and/or click on. Widgets need a widgetized area, or a place in the site that can accept a plugin. The most popular widgetized area is the sidebar. Again, since WordPress is open source, not all plugins will be high quality. There is a lot of choice here too and a low quality plugin can create functionally issues with a site (known by developers as the white screen of death). One plugin can interfere with the functionality of another and these issues can be hard to troubleshoot. Plugins are not as customizable as themes and many are not meant to be customizable at all.

Another area of frustration is the terminology. The glossary is a very coder-centric list of terms. As the community of users grows and changes, this becomes a stumbling block for non-technical users as well as visual communication designers. Also because WordPress was developed primarily for blogs, the anatomy can be confusing when using it for a static site. Some unfamiliar terms are hook, loop, boolean, taxonomy and template.

The next area is documentation resources. There is a wealth of information available on the WordPress Codex, the online storehouse for documentation, but it is cumbersome to search and again is very coder centric. It is difficult for non-coders
to follow some of the instructions and uncover best practices. A user can post to the
support forum as well, but again the answers can be intimidating. There is a great
deal of unaffiliated documentation and forums on the Internet, but it can be difficult
to determine what is quality information. Choosing a building strategy based on bad
information can lead to poor results. There are many blogs and tutorials on the Internet
but you have to trust that the source is reliable and relevant. If WordPress is to be used
by non-programmers, the terminology and documentation resources need to consider
that user.

A lack of coding knowledge can be an issue. Default themes are simple, some
time and experimentation can produce acceptable results. But a more robust theme
will be significantly more complicated and a more than basic knowledge of PHP may
be required. Trial and error can produce satisfactory results for small tasks. For
example, a user not really sure how to remove the “Powered by WordPress” can open
the footer.php file, delete or comment out a line of code, update the changes and view
the site to see what happened. If it does not produce the desired result, undo that process
and try another line. But more complicated changes will require a greater knowledge of
PHP. And it might not be that simple to find the right line of code in a complicate theme.

Finally, the last area of frustration to learning WordPress is that is it a complicated
piece of software. It was developed to be useful to everyone and in that necessitate its
complexity. It was designed to accommodate almost any website need and be a do-it-
all content management system and that makes it large and unwieldy. Every feature
has its own separate code stored in the files whether the feature is used or not. All this
extra, unused code ‘bloats’ the site slowing page loads and using server space. As its
capabilities increase the learning curve does as well.

So while the usability problems with the interface are minor, combine that with six other areas of frustration and that becomes incredibly impactful. Any one of these areas could be a barrier to entry for a visual communication designer new to WordPress. With seven different sources of user experience, it is very likely that a user will not be able to complete a task in one of these areas and meet with frustration.

**Study Limitations**

This study uncovered usability problems with WordPress for visual communication designers beyond the interface. It will serve as an important starting point for further research. During the research process methods were made apparent to improve upon this study and should be taken into consideration for further research.

Typically, heuristic evaluations are conducted by many evaluators based on the theory that it is extremely difficult for one person to find all of the usability issues in a interface. And different users will find different issues, as usability expert Jakob Nielsen states “it is possible to improve the effectiveness of the method significantly by involving multiple evaluators” (Nielsen & Mack, 1994, p. 26). Only one person conducted this heuristic walkthrough so the study would benefit from multiple evaluators. Also, “experience with usability guidelines, user testing, and the design of user interfaces, leads to more effective usability inspection problem reporting” (Nielsen & Mack, 1994, p. 10). This researcher has very little formal usability training or experience. It would be reasonable to expect a more experienced evaluator would have uncovered more
problems.

While Nielson states that five users are enough to find most usability problems (Nielsen, 2012), the recruitment of more users could be helpful. A recruitment email was send to fifty eight local web designers requesting participation in the study. The email was to determine eligibility for the study. Potential participants were asked to rate their knowledge of both web development and WordPress. There were only twelve responses to the request and seven of those were eligible (one participant did not complete the survey questionnaire correctly so that data was not included in the final results). As participants began the task scenario, it became evident that several participants rated himself or herself to have a greater knowledge than they actually did. This would indicate the recruitment method needs modification. A potential way to recruit more participants would be to develop a usability test that could be completed remotely. This would expand the recruitment area. One participant had difficulty using the laptop that was provided and felt frustrated not being in his or her own workspace with access to their own resources. Several became nervous and self conscious about what they were doing because I was watching and taking notes. A remote test would solve these issues as well.

**Chapter VII: Future Goals and Conclusion**

The results of this study indicate that, including the interface, there are seven areas that can contain barriers to learning WordPress for visual communication designers. Therefore, tools are needed to assist the learning process. Two potential tools are a user’s guide and the other solution is curriculum. A user’s guide or
manual would be an effective way to encompass an extremely comprehensive set of instructions. A manual is a practical reference material allows the users to learn at their own pace.

Curriculum development of a course to learn WordPress would be another valuable option. A course specific to WordPress would integrate well with other web courses. Curriculum is flexible and well suited to stay updated with changing technology and the book would make a useful supplement. Based on the interest and need, it could be a full semester course for students, a workshop for professionals or even an online course. Both of these tools would benefit visual communication designers as well as non-technical users interested in learning.

Building a website in WordPress requires a breadth of web knowledge beyond a single software application. Often, someone interested learning in these other areas has to study each area on its own. There are online resources and tutorials that offer beginner, intermediate and even advanced lessons on a single subject. I propose that the curriculum should be comprehensive and cover all of the topics, a soup to nuts approach. A course outline would include terminology and an overall understanding of how a CMS works. But building and launching a website requires the use of many tools. A content management system needs a web server and a database. WordPress can be installed on a local hard drive, when this happens, both of these need to be installed and configured locally as well. It is not uncommon to build the site locally before it is moved to a hosting provider. Overview of FTP and a refresh of HTML and CSS would be important along with an introduction to PHP. Customization becomes much more feasible with just a little understanding of how PHP works. These are all
topic areas separate from WordPress but are integral. A lack of knowledge in any of these creates its own barrier to learning WordPress. Another important aspect is knowing the architecture and hierarchy of the theme files. What would also be helpful is best practices and an overall strategy to approach a new site build. This is essential to understand when modifying existing PHP files in a theme or building a theme from scratch. Recommendations for reliable resources would be invaluable. Finally, it is important to show how WordPress is integrating with advancing web standards and technologies, such as responsive design.

This study also creates a foundation for future usability studies and problem fixes. There is a significant lack of current research on the topic, but it is important to establish the visual communication designer as a user. WordPress would be wise to acknowledge and cater to those market needs. And as the line between designer and developer blurs, it shows where we should focus to maximize our learning to expand our knowledge and skills. My own goals for this research are to help other visual communication designers break past barriers to learning WordPress, customizing themes, building websites and capturing a share of the market.
Appendix 1 - Heuristic Walkthrough User Tasks

Task 1. Change the site title and tagline.

1. Customize Your Site OR Appearance

2. Site Title & Tagline

3. Site Title & Tagline
   Site Title
   Pickett Thesis
   Tagline
   Usability of WP for visual communic.
   □ Display Header Text

4. Save & Publish OR Cancel

5. Close

Task 2. Change home page to a static page.

1. Customize Your Site OR Appearance

2. Static Front Page

3. Static Front Page
   Your theme supports a static front page.
   Front page displays
   □ Your latest posts
   □ A static page
   Front page
   Home
   Posts page
   Blog

4. Save & Publish OR Cancel

5. Close
Appendix 1 - Heuristic Walkthrough User Tasks

Task 3. Define general permalink structure

1. Settings
   Permalinks

2. Month and name
   http://localhost:8888/2014/04/sample-post/

3. Save Changes

Task 4. Delete “Hello World” post.

1. Posts
   All Posts

2. Hello World

3. Hello World
   Edit | Quick Edit | Trash | View
   Move this item to the Trash

4. 1 post moved to the Trash. Undo

Task 5. Delete “sample” page.

1. Pages

2. Sample

3. Sample
   Edit | Quick Edit | Trash | View
   Move this item to the Trash

4. 1 page moved to the Trash. Undo
Appendix 1 - Heuristic Walkthrough User Tasks

Task 6. Define general permalink structure

1. [Image]

2. Add New Page

3. Publish

Task 7. Set up a navigation menu.

1. [Image]

2. [Image]

3. [Image]

3. Add to Menu

4. Save Menu
Appendix 1 - Heuristic Walkthrough User Tasks

Task 8. Delete default plugins.

1. <image>

2. <image>

3. <image>

4. <image>

5. <image>

6. <image>
Appendix 1 - Heuristic Walkthrough User Tasks

Task 9. Add a header image.

1. Appearance
   Header

2. Select Image
   You can select an image to be shown at the top of your site by choosing from your library. After you choose, an image will be able to crop it.
   Suggested width is 216 pixels. Suggested height is 48 pixels.
   Choose an image from your computer:
   Choose File: mainImage.png
   Upload

OR

Choose a Custom Header

Choose Image

Set as header

3. Crop and Publish
   Skip Cropping, Publish Image as Is

4. Header updated. Visit your site to see how it looks.

5. Save Changes
Appendix 1 - Heuristic Walkthrough User Tasks

Task 10. Add favicon.

1. [Plugins]

2. [Install Plugins]

3. [All In One Favicon]

4. [The page at localhost:8888 says: Are you sure you want to install this plugin?]

5. [All In One Favicon]

6. [Settings]

7. [All In One Favicon Settings]

8. [Save Changes]
Appendix 2 - Recruitment Script

Recruitment Script

Study Title: Usability Test of WordPress for Visual Communication Designers

Principal Investigator: Victoria Pickett

My name is Victoria Pickett and I am a graduate student in Visual Communication Design at Kent State University, under the direction of Professor Ken Visocky-O’Grady. My thesis research is a usability study of the content management WordPress for graphic designers.

You are being invited to participate in a research study. If you choose to participate, you will be asked to take an eligibility survey to ensure you meet the criteria of a research participant for this study. This survey should take less than 5 minutes. This is a formality, if you receive this email, it’s because you are considered a qualified research participant.

All research will remain completely anonymous, and only referred to in an anonymous fashion, example Test Subject A. The documentations will be password protected and secure.

Participation in these research study is entirely voluntary. You may choose not to participate and you may chose to discontinue at any time.

This survey is approved by the Kent State University IRB Protocol # 14-079.

If you meet the characteristics of a research participant you will be asked to review and agree to an Informed Consent Form and a time will be arranged at your convenience to participate in a usability test that will take approximately 2 hours. At the end of the test you will be interviewed and asked to complete a survey.

Click the link below to begin the survey if you wish to participate:

If you have questions, please contact me by phone at 216.544.5195 or email vpickett@kent.edu. You can also contact my thesis advisor Professor Ken Visocky O’Grady at 330.672.1353 or the Kent State University IRB Office at 330.672.2704.
Appendix 3 - Recruitment Survey

Recruitment Survey

Study Title: Usability Test of WordPress for Visual Communication Designers

Principal Investigator: Victoria Pickett

1. Do you make a living as a graphic designer? Yes OR No

2. Do you regularly design websites? Yes OR No

3. Do you consider yourself a developer? Yes OR No

4. Rate your knowledge of HTML (1 being least, 7 being most, 0 for none at all)
   1 2 3 4 5 6 7

5. Rate your knowledge of CSS (1 being least, 7 being most, 0 for none at all)
   1 2 3 4 5 6 7

6. Rate your familiarity of designing for a content management system? (1 being least, 7 being most, 0 for none at all)
   1 2 3 4 5 6 7

7. Rate your familiarity with using WordPress (1 being least, 5 being most, 0 for none at all)
   1 2 3 4 5 6 7
Informed Consent to Participate in a Research Study

**Study Title:** Usability Test of WordPress for Visual Communication Designers

**Principal Investigator:** Victoria Pickett

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

**Purpose**

This thesis study will test the usability of WordPress as it applies to graphic designers. This will become a resource for designers when choosing a CMS and potentially inform the CMS creators of common usability pitfalls for future application versions.

**Procedures**

Candidates identified as meeting the research criteria will be first asked to take a short online survey. Second, they will be asked to perform tasks typical to web design with the content management system WordPress. This should take no more than approximately 2 hours. A 10 minute interview will follow with questions pertaining to the usability of the CMS. Participants are not required to provide their name or any identifying information as part of the interview.

**Benefits**

The research will not benefit from you directly. However, your participation in this study will help to better understand which content management system is a better choice for graphic designers. This study could also inform the application creators of usability concerns.

**Risks and Discomforts**

There are no anticipated risks beyond those encountered in everyday life.

**Privacy and Confidentiality**

No identifying information will be collected. Your signed consent form will be kept separate from your study data, and responses will not be linked to you. Any identifying information will be kept in a secure location and only the researchers will have access to the data. Research participants will not be identified in any publication or presentation of research results; only aggregate data will be used.

**Voluntary Participation**

Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. You will be
Appendix 4 - Informed Consent

informed of any new, relevant information that may affect your health, welfare, or willingness to continue your study participation.

Contact Information
If you have any questions or concerns about this research, you may contact Victoria Pickett at 216.544.5195 or Professor Visocky O'Grady at 330.672.1353. This project has been approved by the Kent State University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 330.672.2704.

Consent Statement
I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that a copy of this consent will be provided to me for future reference.

If you are 18 years of age or older, understand the statements above, and freely consent to participate in the study, click on the “I Agree” button to begin the experiment.
Appendix 5 - PSSUQ

Interview questions

Study Title: Usability Test of WordPress for Visual Communication Designers

Principal Investigator: Victoria Pickett

This questionnaire gives you an opportunity to tell us your reactions to the system you used. Your responses will help us understand what aspects of the system you are particularly concerned about and the aspects that satisfy you.

To as great a degree as possible, think about all the tasks that you have done with the system while you answer these questions.

Please read each statement and indicate how strongly you agree or disagree with the statement by circling a number on the scale. If a statement does not apply to you, circle N/A.

Please write comments to elaborate on your answers.

After you have completed this questionnaire, I'll go over your answers with you to make sure I understand all of your responses.

Thank you!

1. Overall, I am satisfied with how easy it is to use this system.

STRONGLY AGREE

1 2 3 4 5 6 7

STRONGLY DISAGREE

COMMENTS:

2. It was simple to use this system.

STRONGLY AGREE

1 2 3 4 5 6 7

STRONGLY DISAGREE

COMMENTS:
3. I was able to complete the tasks and scenarios quickly using this system.

STRONGLY AGREE 1 2 3 4 5 6 7 STRONGLY DISAGREE

COMMENTS:

4. I felt comfortable using this system.

STRONGLY AGREE 1 2 3 4 5 6 7 STRONGLY DISAGREE

COMMENTS:

5. It was easy to learn to use this system.

STRONGLY AGREE 1 2 3 4 5 6 7 STRONGLY DISAGREE

COMMENTS:

6. I believe I could become productive quickly using this system.

STRONGLY AGREE 1 2 3 4 5 6 7 STRONGLY DISAGREE

COMMENTS:
Appendix 5 - PSSUQ

7. The system gave error messages that clearly told me how to fix problems.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

COMMENTS:

8. Whenever I made a mistake using the system, I could recover easily and quickly.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

COMMENTS:

9. The information (such as on-line help, on-screen messages and other documentation) provided with this system was clear.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

COMMENTS:

10. It was easy to find the information I needed.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

COMMENTS:
### 11. The information provided for the system was easy to understand.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

**COMMENTS:**

### 12. The organization of information on the system screens was clear.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

**COMMENTS:**

### 13. The interface of this system was pleasant.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

**COMMENTS:**

Note: The interface includes those items that you use to interact with the system. For example, some components of the interface are the keyboard, the mouse, the screens (including their use of graphics and language).

### 14. I liked using the interface of this system.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
</table>

**COMMENTS:**
15. This system has all the functions and capabilities I expect it to have.

| STRONGLY AGREE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | STRONGLY DISAGREE |

COMMENTS:

16. Overall, I am satisfied with this system.

| STRONGLY AGREE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | STRONGLY DISAGREE |

COMMENTS:

17. Would you use this CMS again?

| STRONGLY AGREE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | STRONGLY DISAGREE |

COMMENTS:

18. What are your overall impressions of this CMS?

COMMENTS:
Appendix 6 - twentytwelve WordPress theme

Welcome to our website

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready to slide off any moment. His many legs, pitifully thin compared with the size of the rest of him, waved about hopelessly as he looked.

I am so happy, my dear friend, so absorbed in the exquisite sense of mere tranquil existence, that I neglect my talents. His many legs, pitifully thin compared with the size of the rest of him.

Recent Posts

- Solace of a lonely highway
- Write with purpose
- Tree on a lake
- Don't stop questioning
- Overheard this morning

Appendix 7 - Pinboard WordPress theme
Appendix 8 - Participant #1 Final Results

Welcome to vacation experiences that are beyond the ordinary. Checkout our insider’s guide to the Dominican Republic, Puerto Plata and the North Coast of the island. Relax your days away on the beaches, pursue adventures or hit the local salsa scene...

places to stay
Appendix 9 - Participant #2 Final Results

visit puerto plata

DOMINICAN REPUBLIC
Welcome to vacation experiences that are beyond the ordinary. Check out our insider guide to Dominican Republic, Puerto Plata, and the North Coast of the island. Relax your days away on the beaches, pursue adventures or hit the local salsa scene.

places to stay

things to do

things to regret

contact

e-mail: info@puertoplata.com
phone: 1-800-531-5055
address: Playa Dorada 638
Puerto Plata, Commonwealth of the Dominican Republic
Welcome to vacation experiences that are beyond the ordinary. Check out our insider’s guide to the Dominican Republic, Puerto Plata and the North Coast of the island. Relax your days away on the beaches, pursue adventures or hit the local salsa scene...

places to stay

things to do

doing & ruglife
Appendix 11 - Participant #4 Final Results

visit puerto plata
Appendix 12 - Participant #5 Final Results

visit puerto plata

Dominican Republic

Welcome to vacation experiences that are beyond the ordinary. Checkout our Insider’s guide to the Dominican Republic, Puerto Plata and the North Coast of the Island. Relax your days away on the beaches, pursue adventures or hit the local salsa scene...

places to stay
things to do
dining & nightlife
calendar
Appendix 13 - Participant #6 Final Results

Welcome to vacation experiences that are beyond the ordinary. Check out our insider’s guide to the Dominican Republic, Puerto Plata and the North Coast of the island. Relax your days away on the beaches, pursue adventures of hit the local salsa scene...

places to stay

things to do

dining & nightlife calendar

contact

email: info@visitpuertoplata.com
phone: 1-866-728-5100
address: Plaza Dominica 614
Puerto Plata, Dominican Republic

follow

[Social media icons]
## Appendix 14 - Field Notes

**Participant: #1**  
**Date: 2/25/14**  
**Test time: 1 hour 15 mins.**

### Observations

<table>
<thead>
<tr>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a strong knowledge of HTML/CSS. Can code from scratch.</td>
</tr>
<tr>
<td>He did not know how to inspect the element in the browser to find out what line in the CSS was styling that particular element.</td>
</tr>
<tr>
<td>He put a div around the home text and was then able to modify it.</td>
</tr>
<tr>
<td>He inserted each row of images as a gallery and put each gallery in a <code>&lt;div&gt;</code></td>
</tr>
<tr>
<td>Created a new home page (did not modify the default page).</td>
</tr>
<tr>
<td>Did not make the home page a static page.</td>
</tr>
<tr>
<td>Searched the official WordPress Codex and another site for help.</td>
</tr>
<tr>
<td>Did not know how to install or activate a plugin.</td>
</tr>
</tbody>
</table>

### Direct Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: Do you know what a child theme is or why it is used? A: “No to both”</td>
<td></td>
</tr>
<tr>
<td>Q: What are your overall impressions of this CMS? A: Since I’ve not used a different CMS I have no basis to compare. In terms of usability I’d say it’s fair at best, but it has lots of capabilities, so maybe it HAS to be complex.</td>
<td></td>
</tr>
<tr>
<td>Q: Would you use this CMS again? A: If I had to I would, and there are times when I have to.</td>
<td></td>
</tr>
</tbody>
</table>

### Participant Comments

It had been over a year since participant had worked in WordPress. He expressed a need to refresh his memory about the Dashboard.
Appendix 14 - Field Notes

Participant: #2  
Date: 2/27/14  
Test time: 2 hours

<table>
<thead>
<tr>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>He is familiar with WP but usually chooses to pass the final design off to a developer rather than build it himself. It takes too much time/effort for him to build his designs.</td>
</tr>
<tr>
<td>Participants first step was to create the navigation menu. He was able to style the nav menu correctly.</td>
</tr>
<tr>
<td>Does not care for 2014 theme, and went to WP Shower (<a href="http://wpshower.com/">http://wpshower.com/</a>) to look for a better theme. Did not find what he wanted, so he ended up choosing 2012. Spent approximately 15 minutes looking for a theme.</td>
</tr>
<tr>
<td>Thought about how to approach the functionality of what I am calling the gallery areas.</td>
</tr>
<tr>
<td>Modified footer.php to get rid of the &quot;Powered by WP&quot;. Added contact info as a &lt;ul&gt; in footer.php. He added any HTML directly to the .php files.</td>
</tr>
<tr>
<td>Suggested Theme Forest as a good place to find themes. Reiterated a desire to find a theme much closer to the web page design. Downloaded another template, but didn’t like it, so he deactivated it.</td>
</tr>
<tr>
<td>Placed images in a gallery but did not think that was the right way to approach the functionality.</td>
</tr>
<tr>
<td>Was not familiar with creating child themes or the purpose behind them. He edited the main style sheet directly.</td>
</tr>
<tr>
<td>Was extremely familiar with inspecting the element in the browser to find the line of CSS in the style sheet. Prefers Firefox and Firebug. But he edited the style sheet right in the WP editor, not a separate text editor.</td>
</tr>
<tr>
<td>His approach was to accomplish as much as possible throughout the WP dashboard and setting options before modifying any of the PHP or CSS files</td>
</tr>
<tr>
<td>Of all the participants, this one was definitely the most knowledgeable about developing a web site and using WordPress.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Direct Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: What are your overall impressions of the this CMS? A: WP as a CMS is one of the most developed and supported products on the market. I would like to see it tailor more toward a design audience, but I understand the power of maintaining universal appeal. Although often challenged by the WP back-end, I am always eager to dive right back in.</td>
</tr>
<tr>
<td>Q: Would you use this CMS again? A: No Response</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wants to find a theme closer to the design to start with.</td>
</tr>
<tr>
<td>I imagined those rows being generated by posts and possibly landing where they may on the home page based on their categories?! The issue is then modifying the loop to appear in a number of places which thinking it through is not the easiest if possible at all. Most likely the categorization would occur without modifying the loop, but rather creating dedicated areas on the home page for the content to sort into. The hardest part for me is to grasp was the fact that there are three sections of content. When you mentioned coding right in the page, that opened a lot of doors in my thinking.</td>
</tr>
</tbody>
</table>
**Appendix 14 - Field Notes**

**Participant: #3**  
**Date: 2/27/14**  
**Test time: 50 mins**

<table>
<thead>
<tr>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>First thing the participant did was to search Google for a 3 column theme. Downloaded the zip file and uploaded directly through the WP dashboard.</td>
</tr>
</tbody>
</table>
| This theme had many options for configuration. The theme had options to change:  
  - Nav bar color  
  - Background color  
  - Footer color  
  - Social media links  
  - And many more |
| Participant was able to accomplish much of the design without having to modify the .css (looking at the .php files for this template, they were super complicated because of all of the functionality of the template) |
| He installed Google fonts plugin successfully. Also successfully downloaded Contact Form 7 for the Newsletter form field. |
| Add a new page as a post (not a page) |
| Was only able to insert the calendar in the footer. |
| Inserted the images individually, not in a gallery, and the template had robust options to adjust alignment. |
| Knew the concept of inspecting the element to find the line in the .css to modify styles, but was not an expert and hesitant to put it into practice. Could read .css but not write from scratch. |
| Once the participant created the page as close as possible using the functionality of the theme and the WordPress dashboard, he was stuck. Did not know how to approach further customization. |
| The template choice was a good one. He got farther faster than any of the first 3 participants. If Participant 2 had this template, he could have easily completed the task scenario. |

<table>
<thead>
<tr>
<th>Direct Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: What are your overall impressions of the this CMS? A: Its the best and the most flexible out there, however that does not mean that it is the best to use. Its interface is not intuitive, its not designer friendly, it is not WYSIWYG, the documentation is way too technical.</td>
</tr>
<tr>
<td>Q: Would you use this CMS again? A: No Response</td>
</tr>
</tbody>
</table>
Appendix 14 - Field Notes

Participant: #4  
Date: 3/7/14  
Test time: 35 mins

<table>
<thead>
<tr>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed a new theme.</td>
</tr>
<tr>
<td>Could not figure out how to navigate to a page using dashboard navigation.</td>
</tr>
<tr>
<td>Didn’t know how to set up home page as a static page.</td>
</tr>
<tr>
<td>Inserted the header image.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Direct Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: What are your overall impressions of the this CMS? A: I think WordPress is very difficult to learn and not intuitive at all.</td>
</tr>
<tr>
<td>Q: Would you use this CMS again? A: I don’t want to, but I know that it's imperative to learn</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had been a while since she had used WordPress and she felt like she had forgotten everything she knew.</td>
</tr>
</tbody>
</table>
Appendix 14 - Field Notes

Participant: #5  
Date: 3/11/14  
Test time: 44 mins

<table>
<thead>
<tr>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has used for blog sites only, never used WordPress for a static site.</td>
</tr>
<tr>
<td>Too intimidated to try to install a plugin.</td>
</tr>
<tr>
<td>Participant got frustrated quickly because as soon as she got stuck, because she wasn’t at home, she didn’t have her arsenal of resources to troubleshoot. (books, other website’s HTML files, etc.)</td>
</tr>
<tr>
<td>As a work around for above, participant opened her own live website in a browser and viewed the page source and copied that code. Copied CSS as well. She can write HTML/CSS from scratch but was looking for the &lt;DOCTYPE!&gt; etc at the head of an html page.</td>
</tr>
<tr>
<td>Used Firefox and Firebug to inspect element.</td>
</tr>
<tr>
<td>Has about 2-3 clients a year that want a website. 30-40% of those want CMS. So she doesn’t have a huge need to learn WordPress.</td>
</tr>
<tr>
<td>She just opened Text Wrangler and started building a page from scratch. Got frustrated with WP right away and abandoned it. But doesn’t know what she would do with this code one she got the page display correctly. Doesn’t know how or where to incorporate HTML into WordPress.</td>
</tr>
<tr>
<td>Got really frustrated really quickly. Felt incompetent and intimidated. Frustration went quickly to 10 on a 1 to 10 scale.</td>
</tr>
<tr>
<td>A common approach for the participant is to look for an existing website that is built similar to this and copy the source code. (Doesn’t have to be a site built in a CMS).</td>
</tr>
<tr>
<td>She also would have referred to existing HTML docs on her own hard drive she had already coded herself and snatched bits of that code as well.</td>
</tr>
<tr>
<td>Very quickly didn’t think she could solve the problem and wanted to quit.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Direct Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: What are your overall impressions of the this CMS? A: Hate it!</td>
</tr>
<tr>
<td>Q: Would you use this CMS again? A: Never. Not without building in time to do tutorial on how to use it. If I had that, perhaps I would consider it.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would never use to build a site for a client. If they wanted a website, she would code from scratch. If they wanted a CMS, she would design and hand off to developer.</td>
</tr>
</tbody>
</table>
**Participant: #6**  
**Date:** 3/14/14  
**Test time:** 1 hour 9 mins.

### Observations

- He regularly builds WordPress sites for clients.
- Most of his client business is web. Estimates 75% say they want a CMS. If a client asks for CMS, they use WordPress. This usually means a customized template.
- If familiar with the back end file structure and hierarchy of WordPress.
- Very familiar with inspecting the element to look up code lines for selectors.
- First step was to delete existing posts in the dashboard.
- Opened sidebar.php and modified to get rid of sidebar. Knows PHP fairly well.
- Started making progress quickly and is very familiar with WordPress and has used recently.
- Participant modified a lot of CSS because of time limits. If it was a real project we would have modified PHP.
- Would have made a child theme if this was a real project.
- Ran into issue with media. Inserting images destroyed all the code for the `<h4>` tags, a common WordPress problem. Chose to create `<divs>` for the images to style them himself.
- WordPress was also inserting random `<p>` and `<br>` tags that participant removed with the CSS.

### Direct Questions

**Q:** What are your overall impressions of the this CMS?  
**A:** WP is an over-hyped system for building sites. The ability to give clients a full CMS is sometimes necessary, but largely its not needed. Contextual CMS is much better in most situations where the client just needs to add and edit a post - not the entire style of the site. Mail Chimp’s editor is much better than WP’s editor. Of course, nothing beats just doing it by hand.

**Q:** Would you use this CMS again?  
**A:** I’m not sure I’ll have choice.

### Participant Comments

- Likes to find a template that is close to the design and customize from there
- Used WordPress Admin as a text editor. Usually builds in a real text editor. So his approach was modified because this was a timed task.
- When editing in the dashboard editor, the delete key is a browser shortcut for back page. If your text isn’t save, you lost it if that happens.
References


