SEG 3125 Assignment 2 Fadi Malek

User Interface Heuristic Evaluation

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Table of Contents

Introduction			
Heuristic Evaluation	4		
Part 1 of 6: Heuristic Evaluation of the Front / Main Pages	5		
Part 2 of 6: Heuristic Evaluation of the Member's Area Pages	8		
Part 3 of 6: Heuristic Evaluation of the "Search" Pages	11		
Part 4 of 6: Heuristic Evaluation of the "Help" Pages	14		
Part 5 of 6: Heuristic Evaluation of the "View Item" Pages	16		
Part 6 of 6: Heuristic Evaluation of the "Sell-an-Item" Pages	19		
Conclusion	23		
Annex	24		
Abbreviations for Heuristic Observations	25		
H1 Group: System Visibility Status (Giving User Feedback)	25		
H2 Group: System Behaviour (According to User Expectations)	26		
Severity Rating Definition	27		

Introduction

The system under evaluation, webstore.com, is a competitor to eBay.com. It aims to provide some of the same services of ebay.com; however, instead of charging listing fees, webstore.com uses advertisements to maintain its operations. On webstore.com, users can search for items and post items for sale in either an auction format or a fixed-price format. This user interface, being a fully developed e-commerce website, is comparatively complicated, and it would not be realistic to evaluate every page.

Thus, interfaces will be grouped into six main categories and analyzed thus. The six categories are as follow: the "main/front" page, the "member's area" pages, the "sell-an-item" pages, the "help" pages, the "view item" pages and the "search" pages. These categories is representative of the main functionalities the website provides.

Thus, a heuristic evaluation of these categories of page would be an effective overall evaluation of the website.

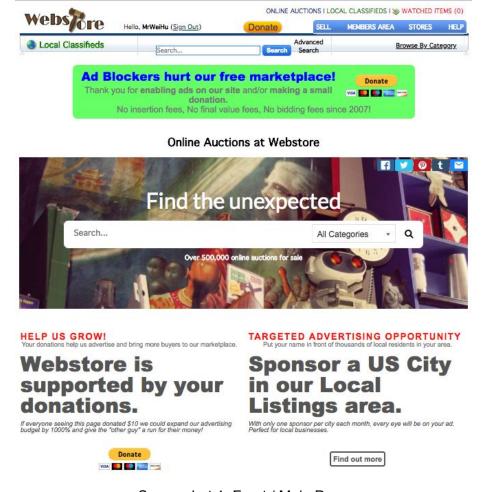
Both members in the group performed the heuristic evaluation separately and individually. Then, we combined our observations; this approach was done in the hopes that the highest number of observations can be made, and the most amount of malfunctions can be detected.

The heuristic principles used are the ones that Dr. Fadi Malek discussed in class. A comprehensive list of the abbreviation used to discuss these heuristic guidelines can be found in annex. A measure of severity rating, as discussed in class, can also be found there. For each guideline that is violated, an abbreviation of the relevant heuristic guideline, a severity score, as well as potential fixes are given.

Heuristic Evaluation

The Front / Main Pages
The Member's Area Pages
The Search Pages
The Help Pages
The View Item Pages
The "Sell-an-Item" Pages

Part 1 of 6: Heuristic Evaluation of the Front / Main Pages



Screenshot 1: Front / Main Page

This screen is the one that users see when they arrive at "www.webstore.com." When users arrive on the site, they expect to be given a concrete understanding of what the website is meant to do. They also expect to be shown or given an intuition on how to go about using the functionalities the site provides. It is problematic that users cannot easily determine the purpose of the website. There is very little indication that the site contains items for sale. The page is unnecessarily clustered, and it is unclear where the user should go from there.

There are two search bars, which is confusing. There is no consistency in the design of the buttons and in the use of fonts and styles. Contrary to convention, requests for donations take up a large percentage of the screen and are placed in the most important and prominent areas.

Heuristic Violations

[H1-10 / H2-10] [Severity 4] (Help and documentation) (Usability Catastrophe; Imperative to Fix)

The system should visibly provide users guidance on how to use the website:

Users expect the system to provide clear instruction on how the site is meant to be used. As discussed, the front page of the website does not give users good intuition on what purpose the site serves, and users, without receiving the expected support would not have confidence in using the site, and would refrain from exploring further.

Recommended Fix: On the front page of the website, in a prominent location, there should be a "get started" or "take a tour" guide for new users. There should also be a clear description of how the website is meant to be used and what services are provided. There should be clear steps on how to register, find an item, as well as where to get help if needed. The help button, instead of being put to the side, as shown in the figure below, should be placed in a prominent place of the front page.



[H2-8] [Severity 3]

(Aesthetics and minimalist design) (Major Usability Problem; Important to Fix)

Users expect a clear and uncluttered front page that contains only the important information and not information that is unnecessary, or rarely used. The front page should be a simple and non-intimidating first exposure to the service. On this front page, there is too much information which act as distractions that bring users away from the

information that they really need. The relative visibility of the important information is diminished as a result of a non-minimalistic design.

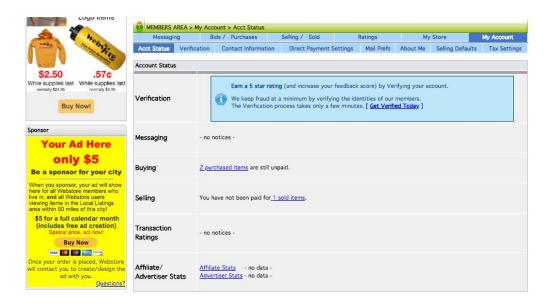
Recommended Fix: To improve aesthetics and promote a minimalistic design, the recommendation is to drastically simplify the front page. The number a element present in the front page should be reduced to a handful. While the ads asking for donations to support the website might be a necessity, it should not take up 40% of the front page (it might make sense to have it take up more area on other pages, but not on the front page, because new users that are seeing the website for the first time are unlikely to donate). Also the large search bar with a large background image which take up 30% of the page can be simplified and reduced in size: there is no need for that background picture which take up room that can be better used.

[H2-4][Severity 2]
(Consistency and standards) (Minor Usability Problem)

Users expect a consistent experience when using the service. There is no consistency in the design of the buttons and in the use of fonts and styles. Furthermore, the layout of the page is structured in a way that is inconsistent with other sites that provide the same service (e.g. requests for donations ads take up a large percentage of the screen and are placed in the most important and prominent areas). There is also two search bars, which introduces an inconsistency that may confuse users.

Recommended Fix: One of the redundant search bars can be removed. As suggested above, the advertisements requesting for donations can be simplified. A common theme should be used when designing the appearance of the interface to ensure that users have smoother and more consistent experience when using the site. This recommendation applies to many of the screens that will be discussed below; thus, to be succinct, we will say it once and not mention it up again in our future discussions.

Part 2 of 6: Heuristic Evaluation of the Member's Area Pages



Screenshot 2: Member's Area Page

This screen is shown when users sign in. The page is cluttered and complicated: there are many colours as well as a distracting and malaligned banners. The way the menu is divided into subcategories makes it difficult for user to find specific functionalities. Furthermore, the help button is not placed in a prominent location.

Users who sign in for the first time would be faced with this page: they might be intimidated by the complexity and be discouraged from exploring further. There are no clear exits on the page, nor are there indications on where to proceed. There are no clearly marked path nor a clear menu / map of the website.

Again, like the front page, there is no consistency in the design of the buttons and in the use of fonts and styles. The most important functionality of the website, the "search bar," is small and placed in a non-prominent location.

Heuristic Evaluations

[H1-6] [Severity 2]

(Clearly marked exits) (Minor Usability Problem)

Arriving on the member's area page, it is difficult for users to determine where to go next. The system does not give users hints on what should be done to exit the member's area. The complex menu bar, as highlighted below, confuses users: there is no way of using it to get back to the main page. In fact, it turns out the Webstore logo at the top of the page is the only way for user to exit form the member's area.

MEMBERS AF	REA > My Acc	count > Acct Status						
Messagin	g	Bids / Purchases	Selling / Sold) J	Ratings	Му	Store	My Account
Acct Status	Verification	n Contact Information	Direct Payment S	ettings	Mail Prefs	About Me	Selling Defaults	Tax Settings

Recommended Fix: Include in the Member's Area a clear exit to the main page: perhaps a button saying "Save Account Settings and Return to Webstore." In the complex menu bar (which should be simplified, as will be discussed below), a similar "return to main page" button can be placed. Ideally the button should be of different colour so it can stand out from the other less essential pages.

[H2-8] [Severity 2-1]

(Aesthetics and minimalist design) (Minor Usability Problem / Cosmetic Problem)

The member's area page, especially the menu bar is cluttered. There are far too many options in the menu. Users expect a clear and uncluttered member's area page that contains only the important information and not information that is unnecessary, or rarely used. On this front page, excess information acts as distractions that bring users away from the information that they really need. The relative visibility of the important information is diminished as a result of a non-minimalistic design.

Similarly, on the side of the member's area, the menu items are listed as follow:



Much like the toolbar, the sidebar is also overly complicated.

Recommended Fix: The toolbar menu should be simplified to 5 - 7 items (e.g. by grouping "Direct payment settings," "Mail pref," "Selling Defaults," etc. all under the common umbrella of "Settings"), while incorporating the changes that were mentioned previously. Likewise, the toolbar can also be simplified. It would be good to group some of the subcategories together and to present these instead: "General Information," "Buying / Selling Preferences," "Account Settings."

ONLINE AUCTIONS I LOCAL CLASSIFIEDS I W WATCHED ITEMS (0) Hello, MrWeiHu (Sign Out) Local Classifieds Browse By Category Webstore Categories [show] Ad Blockers hurt our free marketplace! Thank you for enabling ads on our site and/or making a small WSA CONTRACTOR OF THE STATE OF donation. No insertion fees, No final value fees, No bidding fees since 2007! Advanced Search Choose Search Method: Search | Seller Search | Buyer Search | Store Search Search Keywords The keywords will be matched with the item's name and description Items with Buy Now enabled Include Auction-style items Auction Items with No Reserve Price only ltems with the Best Offer option Items for which you can use Direct Payment (ie. Paypal) ltems with Free Shipping only Items with Local Pickup Allowed only Item Condition Any \$ Listed In Both \$ View Results Open Auctions Only \$ Country | All Countries 4 ZIP

Part 3 of 6: Heuristic Evaluation of the "Search" Pages

Screenshot 3: The Advanced Search Page

There's a good chance you'll find many new and used items matching: "" on Webstore FREE Online Auctions

Webstore is made up of thousands of sellers ranging from large businesses to private individuals. You deal directly
with the seller cutting out the middle-man and saving a lot of money!

Since our sellers don't pay any fees at all, they can offer you the best possible deals on: , items.

This screen is reached by clicking on the "Advanced Search" link beside the main search bar. On this page, the user expects to be able to get help with finding items. However, the design of the advanced search menu does not facilitate this process. There are four search methods, and it is unclear how the other three differs from the main search function.

Furthermore, unlike what is conventionally expected, the advanced search bar does not appear on the side of the screen and cannot be dynamically customized (this concept will be clarified in the heuristic analysis on the following page).

The help menu titled "Searching for ?" is placed in a non-prominent location; it is unlikely that users will scroll to the very bottom of the page to read its contents (the screenshot above is significantly zoomed out; at full-scale, users would need to scroll down quite a bit to be able to see the help description). Furthermore, the "see also" link on the right sidebar does not serve any purpose: it does not provide any feedback.

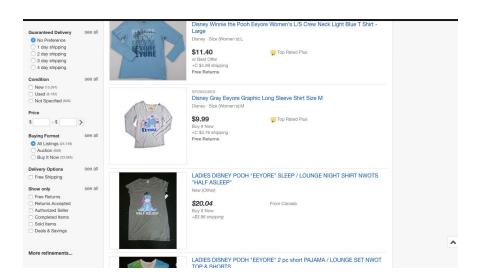
Again, the page is cluttered and complicated, though better than the other pages. Much like before, there is no consistent theme, style, nor use of font.

Heuristic Evaluations

[H2-7] [Severity 2]

(Flexibility and efficiency of use) (Minor Usability Problem)

As discussed, users expect the system to support shortcuts that can speed up the search experience and allow users to more easily customize the search. On most online eCommerce platforms, users can customize their advanced searches on the sidebar dynamically as they are viewing the search results. For example, the screenshot below shows the advanced search sidebar for ebay.com



Ebay.com Advanced Search Sidebar

Furthermore, all the important information should appear on the same page. Ideally, the user need not scroll down (go below the fold) to be able to access all of the crucial information. Instead of having four separate search tabs, with some of which containing only functions advanced users would use, there should be one page containing shortcuts and accelerators that is not visible to novice users but can be helpful to the advanced users. This way, advanced users get a more efficient experience and novice users and not confused.

Recommended Fix: Include an advanced search search bar on the side that can be customized while viewing the search results. On the main advanced search page, compress the functionalities so that all of it fit without the user having to scroll down. Also, instead of having four search tabs, combine it into the main search page, and include expandable menu to provide those functionalities more efficiently for advanced users (that novice users will not use).

Part 4 of 6: Heuristic Evaluation of the "Help" Pages



Screenshot 4: The Help Page

Users arrive on this page by pressing the help button on the top right toolbar. It is difficult for users to find the important help information, because a lot of the room is taken up by irrelevant information. There is no need for there to have the large "Paypal Buyer Protection" icon. The important information, such as the guide for new users, does not stand out.

The support information is badly organized, and there is no structure to where the information is put. A lot of the crucial information (e.g. "Buying on Webstore") is shown in the additional information section, and some not so useful information is

shown under the main menu. Though better than the other pages, the lack of consistency remains a consistent issue. The various colours present should instead be used to help categorize the menus.

Heuristic Evaluations

[H2-8] [Severity 2]

(Aesthetics and minimalist design) (Minor Usability Problem)

Users expect to be able to easily get help when they land on the "Help Page." The page should not be cluttered, and important information should not be be difficult to location, as it is in this case. The page contains a lot of information that is rarely used, and excess information acts as distractions that bring users away from the information that they really need. The relative visibility of the important information is diminished as a result of a non-minimalistic design.

Recommended Flx: Remove the large "Paypal Buyer Protection" logo which has no use in the help page. Structure the information into three columns (e.g. one section for new users, one section for selling, one section for buying), and ensure there is a clear distinction between the columns and their contents. Less important information and rarely used information (e.g. Webstore API developer support) should be placed less prominently relative to the other information, since most users would have no need for that kind of support.

Part 5 of 6: Heuristic Evaluation of the "View Item" Pages



Screenshot 5: The View Item Page

Items that are for sale are presented through this format. User should ideally be shown the item, the price, the conditions in a easy to understand format. The emphasis ought to be on making the item appear desirable so that users are more inclined to purchase it.

The problem with the interface is that it is difficult for the user to get all of the important information at once. At lot of the relevant information is placed below the fold (see below for more detail), and there is wasted white space on the right that could have been used to show some of that relevant information.

There is a lack of consistency in terms of the button style and the colour scheme, and the different actions that a user can do is spread out across the screen and not organized in any meaningful manner. For example, the option to "suggest a new category," "watch this item" or "report listing violation" would be rather difficult for users to notice. The border frame and the layout of the panels also don't follow a consistent design. Lastly, there is no easy way for user to exit the "view item" state. There is no back button: the only way to go back is to use the browser's "back" navigation button.

Heuristic Evaluations

[H2-2] [Severity 4]

(Match between system and real world) (Usability Catastrophe; Imperative to Fix)

The way an item is presented on the webstore platform does not match how other similar platform presents items, nor how items are presented in the real world. The various information that a user should know about the item is spread out: without scrolling down (go below the fold), users are missing a lot of important information (while screen space is wasted showing non-essential information). In short, items are not presented to users in a way that is familiar to them, and there lacks logic in the structure of the presentation. This problem is imperative to fix, because if the item is not presented to users in a familiar way, users would not take the risk of buying online, and as a result. Webstore.com would not serve any purpose.

Recommended Fix: Put in a different place the unusually placed buttons such as "report a listing violations" "suggest a new category"; they are not essential for all users to see. More information about the item should be shown without the user having to scroll down a lot. Make use of the white place below the white side bar (the white space below the seller information), it would be used to give more information on the item. Organize the information about the item in a more logical manner (e.g. place the price of the item in a prominent location, and chow clearly the condition of sale).

[H1-6] [Severity 2]

(Clearly marked exits) (Minor Usability Problem)

When a user is viewing an item, the system should provide the user a way to go back to the previous search results. Currently, there is no back button: the only way to go back is to use the browser's "back" navigation button.

Recommended Fix: Include in a prominent location a "Return to Search Results" button or link so that users can exit the "View Item" state.

[H2-4] [Severity 2-1]

(Consistency and standards) (Minor Usability Problem / Cosmetic Issue)

There is inconsistent naming of the listings format. The donkey jewelry item shown above is not an "auction item" according to webstore definition, as potential buyers only have the option to buy the item for a fixed price: there is no option to bid on it. However, in the "recently viewed online auctions" section, webstore misleadingly calls the lists the donkey jewelry that is not available for auction.

Recently viewed online auctions



Screenshot: Incorrectly labelled Donkey Jewelry

Recommended Fix: Be consistent in what listing are called. Avoid misleading users by changing the text to "Recently Viewed Online Listing."

Part 6 of 6: Heuristic Evaluation of the "Sell-an-Item" Pages



Screenshot 6: The Sell-an-Item Pages

These screens are used to facilitate users posting their items for sale. Many clicks are necessary for user to post an item. To be able to get to the final page where users enter information about their postings, users are forced to go down a very specific path. First, the user must find a small button on a page containing a large ad telling the

user to pay and get verified. Then, the user must locate a small link that says "start selling with full featured form" or "start selling with easy form." From there on, users are required to classify the item they wish to sell according to a long disorganized list of predetermined categories. Users are also required to choose another obscure "additional category" in order to proceed.

Then users will be presented with a long form containing both mandatory and optional fields. The form is complex and difficult to fill without producing an error.

All in all, it is a difficult process for a user to post an item for sale. A user that ends up successfully posting an item for sale must have succeeded in finding the small button at the bottom of the page which leads to the complex menu and to filling out a confusing form. Due to the user interface design, out of the users wishing to post items and use the website, only a subset stay undiscouraged and finish the posting process.

Heuristic Violations

[H1-8 / H1-9 / H2-5 / H2-9] [Severity 3]

(Prevent errors & Help users recognize, diagnose, and recover from errors) (Major Usability Problem; Important to Fix)

The process that users must follow to post an item for sale is error-prone. Users can easily select the incorrect form to fill when initially beginning the posting process. Furthermore, due to the long list of disorganized item categories, it is easy for users to select the incorrect category in which to put the item. Upon selecting the correct category, users must then fill out a complicated form that is error-prone. In order to end up posting an item, users must have successfully, users must have successfully avoided errors while following a very specific path.

During the entire process, it is non-trivial for users to recover from the errors that they have made. For example, when a user chose the wrong form, the interface does not make clear to the user the decision he or she had made (e.g. users accidentally chose posting a classified ad instead of posting an item auction). Similarly, when a user

wishing to use the "easy form" for posting items accidentally chooses the "full featured form," if the user had already entered some of the information, there is no way for the user to retain the information entered and transfer it over to the "easy form." Instead, the user must restart the entire item posting process.

Furthermore, when users make mistake while filling out either the "easy form" or the "full featured form," the system does not provide a clear description of the errors that has been made, and it is not until users try to submit the form that these errors are made clear to the user. More support should be made to allow users to recognize the errors that have been made at the same time the user is filling out the form.

Recommended Fix: First of all, to reduce the likelihood of users selecting the wrong path when beginning the selling process, each of the buttons associated with each of the selling methods should be assigned a different icon (right now, they have similarly looking buttons). Furthermore, the more commonly used options (listing an item for sale) should be placed in a place that is much more prominent to that of less used options (listing a item on local classifieds). To deal with users that have selected the wrong option, on the page that is landed on, create buttons that allow users to change their mind while preserving the information that they had entered in the incorrect form and have it transferred to the new form. Also, when users are filling out the form, the system should check for errors immediately after users have finished filling out a field, and help the user recognize it right away. Also, the mandatory fields should be put together and only after users have filled out those fields are the non-mandatory fields presented. This setup will act the prevent errors: users will not accidentally submitted a form with incomplete mandatory fields, and have spent a lot of time on optional fields.

[H1-6] [Severity 2]
(Clearly marked exits) (Minor Usability Problem)

While following to path that leads to the description form for posting the item for sale, there is no easy way for users to exit. The only way to return to the previous page

is to use the browser's back button (and when the back button is pressed, the information that has been entered is lost). The only way for users to leave the screen without using the back button is to click on the main toolbar on the top of the page (e.g. Member's Area), which similarly leads to information loss. Users cannot save the state of their listing and return to it at a later time unless they have made it all the way to description long form near the end of the listing process.

Recommended Fix: On each page during the process, present a prominent "back" button as well as a "save progress" so that users can always smoothly exit the process while preserving the work they had done so far.

[H2-1] [Severity 3]

(Visibility of system status) (Major Usability Problem; Important to Fix)

During the listing process, users are unsure how many more steps they still need to go through before the listing is complete. While there is a numbered list at the top of the pages giving user an overview of the process: the various steps require a significantly different amount of time to complete, and the list only appear when user reached the middle of the listing process. As a result, users may discourage and give up on the process near the end when they have almost finished listing.

Users expect the system to always visibly present what step of the process the user is currently on, and that the system notify how many more steps there are until the user reaches the end of the process.

Recommended Fix: A simple solution would be to have a status bar at the top of the page as soon as the user starts the listing process. The idea is to always allow the user to know what is going on and how much is left to do. A good way is to have the status bar show the progress in both a numbered list (which step is the user is on), as well as a percentage (in terms of the expected amount of time needed to finish).

Conclusion

Through the heuristic evaluation, a myriad issues that go beyond some of the more shallow aesthetic, cosmetic and minor usability issue were discovered. To get a representative overview of the site, six of the main functions webstore.com provides along with their interfaces were analyzed (The Front / Main Pages, The Member's Area Pages, The Search Pages, The Help Pages, The View Item Pages, The "Sell-an-Item" Pages). In general, all of these pages lacks consistency in their design [H1-4 / H2-4].

Specifically, the front page did not provide users with a good description of the website's functionality and did not give give user the support they expected [H1-10 / H2-10]. The member's area page lacks clear exits on the page, and there are no indications on where to proceed [H1-6]. As for the advanced search pages, there is no easy way to customize and there is little flexibility in how to narrow down search results [H2-7]. The help pages is clustered, and it should be simplified [H2-8]. On the view item pages, information does not appear in a natural and logical order, as they would in real-world conventions [H2-2]. Lastly, the "sell-an-item" pages, there is a lack a support given to users in terms of preventing errors and helping users recognize and recover from the errors [H1-8 / H1-9 / H2-5 / H2-9].

The severity of these problems ranged from 1 - 4 based on the scale discussed in class. Recommendations were given for all of these problems, and those with high severity rating should be prioritized and repaired first.

Annex

Abbreviations for Heuristic Observations Severity Rating Definition

Abbreviations for Heuristic Observations

H1 Group: System Visibility Status (Giving User Feedback)

H1-1	Simple and natural dialogue
H1-2	Speak the users' language
H1-3	Minimize users' memory load
H1-4	Consistency
H1-5	Feedback
H1-6	Clearly marked exits
H1-7	Shortcuts
H1-8	Precise and constructive error messages
H1-9	Prevent errors
H1-10	Help and documentation

(Based on chapter 7, page 8 of lecture slides)

H2 Group: System Behaviour (According to User Expectations)

H2-1	Visibility of system status
H2-2	Match between system and real world
H2-3	User control and freedom
H2-4	Consistency and standards
H2-5	Error prevention
H2-6	Recognition rather than recall
H2-7	Flexibility and efficiency of use
H2-8	Aesthetics and minimalist design
H2-9	Help users recognize, diagnose, and recover from errors
H2-10	Help and documentation

(Based on chapter 7, page 9 to 16 of lecture slides)

Severity Rating Definition

Severity	Description
0	Not A Usability Problem
1	Cosmetic Problem
2	Minor Usability Problem
3	Major Usability Problem; Important to Fix
4	Usability Catastrophe; Imperative to Fix

(Based on chapter 7, page 19 of lecture slides)