

# Heuristic Evaluation Project Anobii.com

CS4826 – Human-Computer Interaction  
Spring 2012

Due on Week 8, 5PM Thursday 15th of March

Last modified: 12th of March

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# 1. Introduction

This artifact represents the result of a project issued within the module of Human-Computer Interaction (CS4826) at the University of Limerick.

It consists of the **evaluation of an interactive system** through the application of **Nielsen's usability heuristics**, which are guidelines against with the effectiveness and the efficiency of an interactive system, in terms of usability, can be evaluated.

This evaluation method is called **heuristic evaluation**.

This is a **group project**. In fact, the heuristic evaluation is primarily meant to be carried out by a **team of experts**, because the experience showed that different people usually find different usability problems. In other words, the number of usability problems found is proportional – within certain limits – to the number of the evaluators. Further information about this aspect is available at [http://www.useit.com/papers/heuristic/heuristic\\_evaluation.html](http://www.useit.com/papers/heuristic/heuristic_evaluation.html).

The **usability heuristics** used in this project are summarized here:

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

For more details, see <http://www.useit.com/papers/heuristic/>.

## 2. The Interactive System to Evaluate: Anobii.com

*In this section we provide a short description of the interactive system we are evaluating, i.e. the object of this project: the Anobii website.*

In a few words, Anobii is **a social network for book readers and a book retailer**.

“Our mission is to bring book lovers together and encourage reading.”

The name “Anobii” is derived from *Anobium Punctatum*, the latin word from bookworm.

Its service can be characterized by three main functions or verbs.

### **Shelve:**

- Books can be managed in a shelf and categorized
- Users can keep track of their readings

### **Find:**

- Popular, recently added and most-reviewed books can be easily discovered
- Users can find out books by searching them
- Users can take a peek in the shelves of readers with similar tastes, or be hinted by friends and the Anobii community

### **Share:**

- Reading groups, book clubs and discussion forums can be created
- Users can share their shelves and wish-lists with their friends on the most common social networks
- Readers can express their rating and provide reviews for books

Anobii is available on the web, on Facebook, on Twitter, on mobile (apps are available for both Android and iPhone), and on tablet.

To summarise, **Anobii provides services and integration to support the creation of a community of book readers where people can “shelve, find, and share”**.

### **2.1. Sections excluded from the evaluation**

The whole Anobii website is quite large. For this reason, we leave out some parts of it.

First of all, our usability test considers only the **standard web Anobii version**. In other words, the versions of Anobii that are available on Facebook, mobile and tablet platforms are not included in our evaluation. However, it may be possible that some interfaces between Anobii and these systems are inspected.

Secondly, **the following sections are not considered**: Blog, Developers, Retailer-related features, Community Support (Forum – GetSatisfaction.com), Groups.

### 3. Work plan

*Here we point out the main aspects of the work organization for this project, focusing on how the workload is split.*

The work plan is heavily influenced by the nature of the heuristic evaluation as it is meant to be carried out so that:

- all the **evaluators inspect the interface alone** and
- **only after that**, evaluators are allowed to **communicate and collect** their findings

It follows that all the evaluators must go through the entire system on their own. As the Anobii website is not tiny, the evaluations need to be performed on **parts of the system** in a sort of **iterative** process with two macro-steps:

- Exploration of one part the system by the evaluators and usability problems recording
- Meeting to discuss the findings and report them according to agreed severity ratings

So the system is divided loosely into parts only to reduce the website area to focus for each evaluation session. All these parts are inspected in turn from the most important to the less important (roughly); again, it is meant just to focus the effort, not to assign priorities to the website's areas. All the evaluators, of course, must be synchronized with the parts currently subject to the evaluation.

This approach is used, in contrast with a full evaluation session targeting the whole website and a final meeting, so that at every meeting all evaluators can:

- **increase their expertise** about performing the heuristic evaluation (i.e. the activity) by looking at and discussing the findings of the other evaluators
- **leverage the knowledge** about the usability problems found by the other evaluators to perform better evaluation sessions for the other parts of the system at later times

In other words, this process is meant to enable the team of experts for self-improvement.

In the case that impediments for the meetings arise, they can be managed through the use of Skype, emails and/or an apposite Google Docs document for collaborative editing where the evaluators can describe their findings and notes about the evaluation sessions. Moreover, an up-to-date version of this document report is always available and it is updated frequently.

The table on the following page summarize how the website is split into parts in order to accommodate more manageable evaluation sessions.

Evaluation Session	Parts of the system to focus
1 <sup>st</sup>	<p>Homepage. Login / Registration. Search facilities. Sections linked in the footer:</p> <ul style="list-style-type: none"> <li>• About</li> <li>• Translate</li> <li>• Help</li> <li>• Terms</li> <li>• Privacy</li> <li>• Jobs</li> <li>• Contact</li> </ul>
2 <sup>nd</sup>	<p>Main sections of the user's area:</p> <ul style="list-style-type: none"> <li>• Home</li> <li>• My Shelf</li> <li>• Contacts</li> <li>• Charts</li> </ul> <p>Messages. Settings.</p>
3 <sup>rd</sup>	<p>Features not considered in the first two sessions. More detailed interactions with the parts of the system considered in the first two sessions.</p>
4 <sup>th</sup>	<p>Final walkthrough across the entire system in order to collect the usability problems which wasn't caught in the previous sessions.</p>

*Table 1: Workload split*

Again, this table should not be taken as a precise schedule. Instead, it just serves as a loose way to estimate and carry out the bunch of work.

## 4. Exploration Strategy

*Here we provide an overview of the exploration strategy we use while carrying out the evaluation sessions.*

The exploration strategy is the **way in which the evaluators go through the system in search for usability problems**.

Even though the actual strategy is specific and dependent by the single evaluator, here we try to give a simple outline of the commonalities of the methods, ignoring the nuances that inevitably arise from the observers' approaches to problems.

First of all, we recognize that **multiple strategies** and methods are necessary in order to carry out a complete evaluation.

As a result, the following characteristics and considerations apply:

- **Focus:** it cannot be always at the task-level as something may be perceived only when seeing the system at a higher level of abstraction. Consequently, we try to apply different degrees of focus on the system.
- **Errors:** sometimes errors happen. While following procedures, we shouldn't take for granted that the users always perform the operations correctly. So, we should look for common errors and look at how the system behaves under these situations as well as the possibilities for the user to remedy at them. **Using questions is also useful:** is it easy or difficult to incur an error?
- **Consider users' needs first:** the exploration of the system shouldn't always start by looking at the system itself, because this way it is difficult to notice if something is missing. Instead, starting by the users' needs helps to discover lacks and forces the evaluator to ask himself if the user is provided all the capabilities that allow he/she to reach his/her aim.

For the sake of completeness of the evaluation, **we try to go through all the features at least once**. Some of them may require more tests and more combinations of actions and inputs: this should be done as far as the functionality is objectively not marginal.

## 5. Heuristic Evaluation

Here we collect the results of the heuristic evaluation carried on the Anobii website. The usability problems we have found during the evaluation sessions are reported along with their severity.

**About qualities:** not all the good (in terms of usability) solutions are reported, but usually just the more prominent or the more uncommon. Not much effort is spent on them.

**About issues:** we report specific problems and precise information about them as we recognize that generic issue statements are not so useful and tend to be misinterpreted.

### 5.1. Visibility of System Status

*The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.*

No	Issue	Parts of the system affected	Severity
1	The footer menu items gets underlined when the mouse passes over them for the guest homepage but <u>no mouse-over effect takes place in other pages</u> (such as login page, signup page, logged user homepage, ...). Note that this behavior is also inconsistent.	Almost every page except the guest homepage	Minor
2	When the user is typing in the search field, a cascading list box is shown within reasonable time with all the hints for the currently typed content.	Search	Quality
3	The My Shelf → Stats area shows a handful of statistics. E.g.: Visits, Reading history, People helped to find books.	My Shelf → Stats	Quality
4	The function for changing the language of the website is <u>not very visible</u> as it consists of just a select box (without any label), whose current value is the current language of the website, placed in the footer, at the bottom right of the page.	Whole website	Major
5	The user receives feedback about where (the location in the website) he/she is by highlighted section links and tabs (and navigation-style titles sometimes).	Whole website	Quality
6	The Groups area should be more compact, by allowing to display both user's groups and suggested groups. The tabbed layout seems not the	Groups	Major



No	Issue	Parts of the system affected	Severity
	be the right layout choice.		
7	The Wish List page <u>doesn't have any title to give the user a confirmation that he/she is actually in the Wish List page. Moreover, no navigation path is provided, and the Wish list menu item is not highlighted.</u>	Wish List	Major
8	The selected tag is not very visible because of the choice of the tag's background color, which is very similar to the box's background color. In addition, the background color of the tag upon which the mouse is over is the same as that of the selected tag. Moreover, by selecting a new tag, the page is scrolled down.	Tag your books	Minor
9	The book covers cannot be zoomed.	Book page	Major

## 5.2. Match between System and the Real World

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

No	Issue	Parts of the system affected	Severity
1	The “world” link nearby the small Anobii logo in the website that is accessible to logged-in users <u>does not provide any tip and it is difficult to figure it out what it is about.</u> It may be confounded with a localization feature.	Website accessible to logged-in users	Minor
2	The website is localized in several different languages.	Website	Quality
3	The Find Friends page <u>doesn't allow the user to find friends by searching them based on their name.</u> URL: <a href="http://www.anobii.com/journey_add_friend">http://www.anobii.com/journey_add_friend</a>	Find Friends page	Minor
4	In the My Shelf area the user can dispose his/her books in a stylish wooden shelf, resulting in a great map with the real world.	My Shelf area	Quality
5	The Google Map in the “Find a bookstore” page <u>is not by default positioned to the user's actual</u>	Find a bookstore	Minor

No	Issue	Parts of the system affected	Severity
	<u>position</u> nor to the position according to the location settings. Moreover, on the map there isn't the marker that is named at the instructions.		
6	In the Charts area, the Category list on the right contains a subset of the categories by default. The <u>“more” button</u> which allows to show them all <u>is placed at the top of the list</u> (at the right of the box title), whereas it would have more sense if it was at the bottom of the last listed category”. The same applies with the Recent reviews box on the user's home.	Charts, User's home	Minor
7	Groups should be divided into categories, which provide a way for navigating through them. The absence of categories makes it difficult to search groups based on the area they address.	Groups	Major
8	Dangerous actions (Cancel, Delete, Remove..) are in red to suggest the user about the risks of using them.	Almost all state change operations	Quality
9	The “Search this shelf” function <u>doesn't work as expected</u> as some of the books in the shelf are not listed in the search result even if appropriate keywords and in-title words are provided.	Search this shelf	Major
10	The translation of Anobii.com is managed through a system that allows users to contribute. Users can provide translations or simply give feedback about the quality of the translations through voting them.	Translate	Quality

### 5.3. User control and freedom

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

No	Issue	Parts of the system affected	Severity
1	Most operations (e.g. Merge authors, Edit tags, Manage trading, Book import, all the Change settings functions ...) provide a “Cancel” link to terminate the current operation.	Most state change operations	Quality
2	In the Charts area, the system can list the 25 most popular books according to language, category and both. When the user changes the language, the	Charts	Cosmetic

No	Issue	Parts of the system affected	Severity
	<u>category needs to be re-selected.</u>		
3	When the user deletes his/her reviews, the destination page contains a message with an “Undo” hyperlink to restore the review.	Reviews	Quality
4	When the user deletes his/her review from a book's page, the action redirects him/her to his/her shelf. Why should the user want to be redirected there?	Reviews	Major
5	The “Tell a friend about this book” form <u>requires the user to preview the message before sending it.</u> Moreover, in order to preview the message, the destination email addresses must be provided, even though they are not significant for what concerns the message preview.	Tell a friend	Cosmetic
6	The user is informed about his/her location within the website through highlighted menu items or highlighted tabs. However, <u>this behavior is not consistent and, for some functions and pages (e.g. Merge authors, Books import/multiple import, Create a blog badge and more...), the highlighting is lost,</u> losing the navigation information. Moreover, a navigation path such as “My Shelf → Merge authors” is preferable.	Whole website	Major

#### 5.4. Consistency and standards

*Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.*

No	Issue	Parts of the system affected	Severity
1	When closing the Facebook authorization window for login, the user is <u>redirected</u> to the Sign Up page even if it is not his/her intention.	Every part accessible without being logged	Minor
2	The FAQs can be expanded by clicking upon them but <u>cannot be shrunk</u> back.	Help page	Cosmetic
3	The top-right search box <u>differs</u> from the search field for books that is available at the homepage/search page for a select box that targets Anobii.com by default and because it <u>does not provide hints</u> for the search.	Almost every page	Minor

No	Issue	Parts of the system affected	Severity
4	The Find Friends page is actually a reduced and not-so-useful page with respect to the Contact area main page, which is the authoritative page for adding friends. Thus the action “Add friends” should point to the latter.	Find Friends, Contact area	Cosmetic
5	In the My Shelf area, the user can dispose his/her books in different ways very similarly to those that are available in common operating systems for arranging the view of files within directories.	My Shelf area	Quality
6	The submit buttons for the forms in the Contacts → Invite section have <u>light grey borders</u> which are lighter than the standard submit button and are <u>similar to “inactive” buttons</u> .	Contacts area	Cosmetic
7	The user's profile does not contain fields for first-name and surname. There is only one Screen-name field, but it's not the same thing.	User's info	Cosmetic

### 5.5. Error prevention

*Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.*

No	Issue	Parts of the system affected	Severity
1	During the sign-up, the user fills the form but <u>does not get any feedback until the form is submitted</u> .	User registration	Major
2	When a user looks at his/her own book reviews, he/she can click on the thumb-up icon for answering affirmatively to “Is this helpful?”. Once that, an error message (“You cannot vote your own reviews.”) is shown. So, <u>why does the system allow to click it?</u>	Reviews	Cosmetic

### 5.6. Recognition rather than recall

*Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.*

No	Issue	Parts of the system affected	Severity
1	<u>No clue is given</u> about what to insert into the “Add to shelf” field in order to add books in the shelf.	My Shelf	Major
2	The Wish List page contains on the left a list of recently visited books with a “plus” image link on their right (whose function/meaning is written at the top of the list) that allow to add them just-in-time to the wish list.	Wish List	Quality
3	Every page displays a “plus”-icon on the right outside the page boundary. By moving the mouse upon it, a very informative message is shown, clearly stating what the function is about.	Whole website	Quality
4	In the Charts area, the Recent Books box contains four books. They're displayed through their covers, but the pictures are small and <u>don't allow the user to read the title of the books</u> . Moreover, the titles don't appear even if the user moves the mouse upon the covers. The same applies in the Currently Reading box in the user's home.	User's home, Charts	Minor
5	<u>It is not easy to figure out what the select box</u> on the right of the Updates section in the user's home <u>is for</u> . It's for filtering the results, but this interpretation is <u>not straightforward</u> and <u>no hint is provided</u> .	Updates section in user's home	Minor
6	The page for editing Matching Filters <u>doesn't include an adequate description of the feature</u> to help to user understand what it is all about.	Settings → Matching Filters	Minor

### 5.7. Flexibility and efficiency of use

*Accelerators – unseen by the novice user – may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.*

No	Issue	Parts of the system affected	Severity
1	The log-in procedure requires the user to make one <u>unnecessary step</u> by going to a log-in page. In other words, users cannot log-in directly from the page they are browsing.	Log-in	Cosmetic
2	<u>An Advanced Search feature allows to fine-tune the</u>	Search	Quality

No	Issue	Parts of the system affected	Severity
	search in order to find the book the user is looking for.		
3	The results of a search <u>cannot be ordered</u> according to the user's preferences (such as book popularity, number of people who have it, by author...)	Search	Minor
4	The users can add books to their shelves very easily. Often just one-click is needed and page is not entirely reloaded (through AJAX). The same applies for adding books to the wish list.	Book page, Other users' shelves	Quality
5	Books in the shelf can be ordered and filtered in several different ways, resulting in a great flexibility in deciding how to display them. This function gets more and more useful as the number of books in the shelf raises.	Shelf	Quality
6	Users can export their shelf and wish list in multiple formats (CSV, Excel, HTML). This can be considered an advanced feature. The form is clear, the page is minimal, and related FAQs are shown at the bottom of the form. The operation can be canceled through the "Cancel" button.	Export Data	Quality
7	A large number of settings (functional and aesthetic) can be customized for a more efficient interaction with the system.	Settings	Quality
8	It is possible to edit multiple books at a time.	My Shelf	Quality
9	It is not possible to choose how many books to display on the shelf.	Shelf	Cosmetic

### 5.8. Aesthetic and minimalist design

*Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.*

No	Issue	Parts of the system affected	Severity
1	The homepage is really minimal, exposing just the prominent features: description of the system, recent activity, book search facility, login/registration functions, integration with common technologies. The new users can easily discover what Anobii is about.	Homepage	Quality

No	Issue	Parts of the system affected	Severity
2	Pop-under windows often <u>spans more than the browser window's height</u> , so to close them the user needs to scroll the main page.	Whenever a pop-under window is shown	Cosmetic
3	In a book's page the information about the book is shown through a tab pane. The Overview pane should contain the most important information but actually it <u>just displays the information contained by the other tab panes</u> . So, what is the need for the tab pane?	Book page	Minor
4	Almost all the times that a list of items has to be shown, the system provide a view of a small sub-set of the list and the chance to show more items gradually through pages or by adding items at the bottom of the list dynamically and without any page reload ( through AJAX).	Views of a list of items	Quality
5	The whole website is generally very neat, very minimal, and the user is not diverted from the important parts of the pages. This is one of the main characteristics of the website and is applied consistently.	Whole website	Quality
6	User's Settings page is not very compact. It should span the entire content page width. The same applies for the Edit Profile page.	Settings, Edit Profile	Cosmetic

### 5.9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

No	Issue	Parts of the system affected	Severity
1	During the sign-up, if the user doesn't check the checkbox relative to the Terms of conditions and try to sign-up, the registration form <u>loses the information already provided</u> for email and password.	User registration	Major
2	During the sign-up, if more than one field contains invalid information, when the user try to sign-up, the registration form shows <u>only one error</u> , and <u>not in the top-down order</u> as users usually expect.	User registration	Major
3	When closing the pop-under windows that allows users to add a review for a book, an alert dialog is shown to ask for confirmation as by closing the window the	Review Edit box	Quality

No	Issue	Parts of the system affected	Severity
	information added hitherto will be lost.		

### 5.10. Help and documentation

*Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.*

No	Issue	Parts of the system affected	Severity
1	During the Password Reset procedure, down the form there is a selection of related Frequently Asked Questions (FAQ).	Password Reset	Quality
2	The Help page contains a short list of FAQs organized in sections, allows to ask a question, and provides more ways for overcoming problems, such as the forum and a contact form.	Help page	Quality
3	The answers to the FAQs are quite short: they may be more detailed and informative.	Help page	Minor
4	The “Create your Blog Badge” page displays just one link to initiate the procedure, without any description to help the user understand what's the feature is all about.	Create your Blog Badge	Minor



## 6. Severity Rating

*Here we define the severity rating we've used for measuring the severity of usability problems found during the heuristic evaluation on the Anobii website.*

Our severity rating is based on the one that is suggested by Jacob Nielsen at the following address: <http://www.useit.com/papers/heuristic/severityrating.html>.

Nielsen says that the severity of a usability problem, is a combination of the following factors:

- Frequency
- Impact (on system usability)
- Market impact (on users' opinion about the system)
- Persistence

We agree with him, but we think more generally and simply about the **impact on the (typical-)user satisfaction**. The **“importance”** (evaluated qualitatively) of the functionalities / features is also considered: for example, in Anobii, the “Search book” function is deemed far more important than the “Create blog badge”.

Severity	Severity definition
Quality	When a feature provides a good interpretation of the usability principles.
Cosmetic	When an issue has a negligible impact.
Minor	Minor usability problem: fixing this should be given low priority
Major	Major usability problem: important to fix, so should be given high priority
<b>Critical</b>	<b>Usability catastrophe: imperative to fix this before product can be released</b>

Despite some of the Nielsen's definitions refer to the priority which should be assigned to fix the relative problems, we are more about keeping the severity and the priority as separate things. We don't cope with priority, which is a management business. We just assign a severity to the issues in order to provide information and enable the management to make decisions.

## 7. Conclusions

Here we draw the conclusion about the usability of the Anobii website, based on the results of the heuristic evaluation.

The heuristic evaluation has produced the following results:

Heuristic	Issues by severity				
	Quality	Cosmetic	Minor	Major	Critical
1. Visibility of system status	3	0	2	4	0
2. Match between system and the real world	4	0	4	2	0
3. User control and freedom	2	2	0	2	0
4. Consistency and standards	1	4	2	0	0
5. Error prevention	1	1	0	1	0
6. Recognition rather than recall	2	0	3	1	0
7. Flexibility and efficiency of use	6	2	1	0	0
8. Aesthetic and minimalist design	3	2	1	0	0
9. Help users recognize, diagnose, and recover from errors	1	0	0	2	0
10. Help and documentation	2	0	2	0	0
<b>TOTAL</b>		<b>11</b>	<b>15</b>	<b>12</b>	<b>0</b>
	<b>25</b>	<b>38</b>			

From these numbers and from the experience matured from the execution of the heuristic evaluation, we can draw the following conclusions about the effectiveness and the efficiency of the Anobii website in terms of usability:

*The Anobii website has been developed by and large with usability in mind. The system enable for a quite appealing user experience, by leveraging on metaphors (e.g. the shelf) of the real world and by providing a social environment on which book readers can interact with one another and share their interests and passions. The use of standard and consistent behaviors and looks, along with simple and neat design, help the user to find the way. The user's specificity and needs are considered, by providing customizations and contents coherent with their tastes; moreover, for the most experienced users, advanced features are available, while help information is easily accessible (and multiple ways for accessing it are available) for those who are more unskilled.*

*The budget is by and large positive, nevertheless not all is perfect. The minimalist design sometimes collapses to lack of clues and not-so-visible features. Moreover, the layout choice is not always good as it is common to see big parts of the page that are empty: a more compact and efficient design should be pursued. The user may not be provided all the information needed to understand what some functions are all about: this is the main drawback. After all, the existence of a community forum for help is justified by users who cannot find their ways as easily as it should be.*