

Heuristic Evaluation

www.nypl.org

Niki Selken, Yu-Chien Kao

1. SUMMARY

The website of the New York Public Library looks beautiful at the first glimpse as the first time user. There is some good design, such as the map of library's location (<http://locations-beta.nypl.org/map->), the bright and vivid color palette and the diversity of the articles. However, when we deeply look inside, we found out that there are many usability problems. As a site for a library, users are hard to find the resources of what they want, hard to know what is the main point in each page and the hierarchy of the information is not clear to the user.

2. INTRODUCTION

For this analysis of the NYPL website we are using a set of ten heuristics suggested by Jakob Nielsen (Nielsen Norman Group 2014) are summarized below and listed in full detail in Appendix A. We are also using Nielsen's severity rankings scale (Nielsen Norman Group 2014) to help the client tackle the most severe usability issues in a sensible order. Our process in analysing the website was centered around a series of tasks we performed, as a user might. Each of the 10 tasks is outlined below in a chart form (See 5. Specific Problem Areas). A detailed description of the task, usability findings, and recommendations follows the chart in numbered sections 5.1-5.10. If you have any question about the findings or recommendations please feel free to contact either Yu-Chien or Niki directly at the email addresses provided.

3. HEURISTIC EVALUATION TECHNIQUE

Number	Broad Heuristic
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

Date: 11-2-14

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7	Flexibility and efficiency of use
8	Aesthetic and minimalist design
9	Help users recognize, diagnose, and recover from errors
10	Help and documentation

4. SEVERITY RANKINGS

Rating	Definition
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
4	Usability catastrophe: imperative to fix this before product can be released

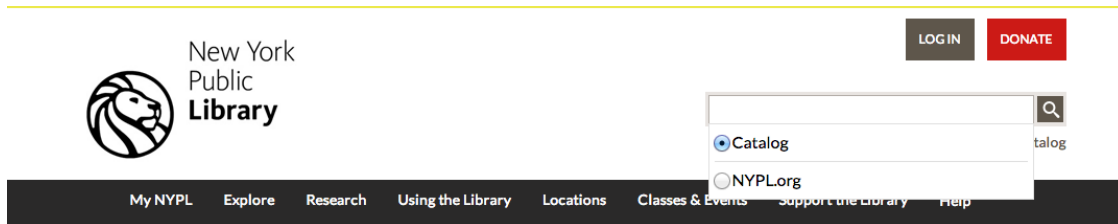
5. SPECIFIC PROBLEM AREAS

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
1	What is the difference between NYPL.ORG and Catalogue in the search bar?	2	Match between system and the real world	3
2	The Relevance in the search is not intuitive. When we searched for Harry Potter the a paperback book of Harry Potter was #10 on the search list after JK Rowling criticism and a couple French Harry Potter books.	7	Flexibility and efficiency of use	4
3	The "Browse The Shelf" button does not help the user locate the book in the library, it takes you to books of a similar genre or category.	7	Flexibility and efficiency of use	3
4	We found a video game sort feature under Form and Genre, but we found no top nav on	7	Flexibility and efficiency of	2

	direct route to get to the Video Game section of the collection.		use	
5	When searching for Books the Topic Section is very sparsely populated with topical options. For example they have German Drama but not Drama. One is way more specific and less popular than the other.	7	Flexibility and efficiency of use	3
6	Under Research>Articles and Databases we tried to search for Emoji, but instead of taking us to the topic, it was just a search for the name of a database or magazine. But the search bar is misleading because it says Database title/description.	2	Match between system and the real world	3
7	Under Research>Articles and Databases some of the databases that came up when we searched for User Experience were not clickable on the title or icon. We had to scroll down to a small link that said more info to go to the page about that resource.	7	Flexibility and efficiency of use	2
8	Under many of the headings the website has so much text without color or images to help guide the eye to what is important that it is hard to understand what the hierarchy of importance is for each page. http://www.nypl.org/events/public-programs	6, 8	Recognition rather than recall, Aesthetic and minimalist design	4
9	On the homepage they are using masonry or something responsive with a grid of images and articles, but because they are all the same color and typeface it is hard to know what is an event, exhibit, podcast, etc.	1	Visibility of system status	3
10	The library shop is slow and it has a completely different layout and color palette which begs the question is it even connected to the library and how? Where am I now?! http://shop.nypl.org/	4	Consistency and standards	2

5.1 The search bar is not clear enough to understand

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
1	What is the difference between NYPL.ORG and Catalogue in the search bar?	2	Match between system and the real world	3



Problem:

For the first time user, it is hard to understand what is “Catalog” and “NYPLorg”. What the users can do is to type something in the search bar and then see what the results is. As a library’s website, a search bar is very important for users to search books and resources. However, this search bar let people confused and not sure what to do with it.

Recommendation:

The search bar should be easy to fix by just change the name of the sort. “Catalog” actually is for users to search resources in the library and “NYPLorg” is for users to serch contents in the website. The context should be rewrite as something like “library” and “website”.

5.2 The Relevance in the search is not intuitive.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
2	The Relevance in the search is not intuitive. When we searched for Harry Potter the a paperback book of harry Potter was #10 on the search list after JK Rowling criticism and a couple French Harry Potter books.	7	Flexibility and efficiency of use	4

The screenshot shows a library search results page for 'Harry Potter'. The search results are sorted by 'Relevance' and show 872 items. The first three results are:

- Harry Potter**: Page to Screen : the Complete Filmmaking Journey. By McCabe, Bob. (Book - 2011). Available to borrow in some locations. Average Rating: 4 stars.
- Harry Potter**: A Pop-up Book. By Kee, Lucy. (Book - 2010). In-library use only at this time in some locations. Holds: 1 on 3 copies. Average Rating: 4 stars.
- Harry Potter**: les raisons d'un succès. By Smadja, Isabelle. (Book - 2001 French). Available by request. Average Rating: 4 stars.

The left sidebar contains filters for 'AVAILABLE NOW...' (At any location: 622), 'FORMAT' (BOOKS, AUDIOBOOKS, MOVIES & TV, MUSIC & SOUND, GAMES & SOFTWARE, JOURNALS AND MAGAZINES, ACCESSIBLE FORMATS, OTHER), 'NEW AT THE LIBRARY...', 'TITLES I CAN...', 'CONTENT', 'AUDIENCE', 'FORM/GENRE', 'TOPIC', 'REGION', 'AUTHOR', 'LANGUAGE', and 'PUBLISHED DATE'.

Problem:

Being that the Harry Potter books are some of the most popular books in the world, why does the search pull up Harry Potter criticism before the actual childrens' books? Moreover, many of the books that came up were in French, which is not the dominant language in New York City.

Recommendation:

In order to accommodate most users, the English language books should come up first, or the search should require you to specify language. Moreover, when searching for a book the database algorithm should be able to learn which kinds of records are most popular and pull those up. Having a smart search, like the one that Google uses, could help this issue. Also, the implementation of cookies or local storage could allow them to see what people search and bring up more relevant results.

5.3 The “Browse The Shelf” button does not help the user locate the book in the library

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
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3	The "Browse The Shelf" button does not help the user locate the book in the library, it takes you to books of a similar genre or category.	7	Flexibility and efficiency of use	3
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Harry Potter

Page to Screen : the Complete Filmmaking Journey

McCabe, Bob

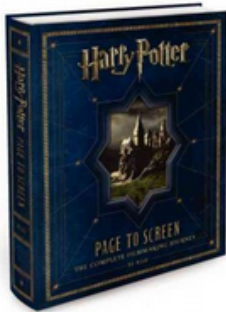
(Book - 2011)

Next »

EXPLORE FURTHER

BROWSE THE SHELF

Average Rating:



My Rating ★★★★★

Print

Add a Comment

Add Tags

Add Details ▾

Save to a List

Add to My Shelves



SUBJECT HEADINGS

- › Rowling, J. K. — Film Adaptations
- › Potter, Harry (Fictitious Character) — Pictorial Works
- › Potter, Harry (Fictitious Character) — Miscellanea
- › Potter, Harry (Fictitious Character) — Handbooks, Manuals, Etc
- › Harry Potter Films — Pictorial Works

Show more ▾

RECOMMENDATIONS

Bookish Recommends

Item Details

Current Collection: Performing Arts Research Collections - Theatre

A Companion to Film Comedy
By Pribram, E...

Emotions, Genre, Justice in Film and Television
By Kelley, Bev...

Reelpolitik Ideologies
By Ebert, Roger

Life Itself
By Renou...

Le cin r
By Renou...

Item Details

EXPLORE FURTHER

BROWSE THE SHELF

SUBJECT HEADINGS

- › Rowling, J. K. — Film adaptations
- › Potter, Harry (Fictitious character) — Pictorial Works
- › Potter, Harry (Fictitious character) — Miscellanea
- › Potter, Harry (Fictitious character) — Handbooks, manuals, Etc
- › Harry Potter Films — Pictorial Works

Show more ▾

RECOMMENDATIONS

Bookish Recommends

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Problem:

In the left column, under the “Explore Further”, there is “Browse The Shelf”. As a first time user, we thought this button will help users locate where the book is, and let us know where we could find it. However, it showed the similar genre or category. The information of the context is misleading.

Recommendation:

The button should change the function to the function of locating resources. If the client want to show the similar genre or category, this part could be designed under the recourse’ information. It is hard to read many information in a pop-up window as well. Thus, the information of the location of the resource could showed in the pop-up window, and the similar category could be designed in other area.

5.4 Missing Navigation and didn’t have clear direct route to information.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
4	We found a video game sort feature under Form and Genre, but we found no top nav or direct route to get to the Video Game section of the collection.	7	Flexibility and efficiency of use	2

Date: 11-2-14

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Smart search results for... [search](#)

Sort by **Date acquired** [Save Search](#) [About your](#)

game

Found 116 items Showing 10 items [Regular keyword search for "game"](#)

AVAILABLE NOW...
 At any location (110) [More locations...](#)

FORMAT
 GAMES & SOFTWARE
 CD-ROM or DVD-ROM (3)
 Video Game (113)

NEW AT THE LIBRARY...

TITLES I CAN...

CONTENT

AUDIENCE

FORM/GENRE
 Video Games

TOPIC

REGION

LANGUAGE

PUBLISHED DATE

RATING

TAGS

Naruto Shippuden Ultimate Ninja [Add to My Shelves](#)
Storm 2
(Video Game - 2010)
Edition: PlayStation 3
Gaming PS3 N
In-library use only in some locations
Average Rating: ★★★★★

NBA 2K11 [Add to My Shelves](#)
(Video Game - 2010)
Edition: PlayStation 3
Gaming PS3 N
In-library use only in some locations
Average Rating: ★★★★★

Call of Duty [Add to My Shelves](#)
Black Ops
(Video Game - 2010)
Edition: PlayStation 3
Gaming PS3 C
In-library use only in some locations
Average Rating: ★★★★★

Problem:

The library has some kind of video game collection. The user only discovers this by searching, not my the top navigation of the website. This makes it almost impossible for the user to intentionally browse the video game collection.

Recommendation:

We recommend that they include a section in the top navigation under Explore>Collections>Games so that the user can browse the game collection and find games that are available for check out.

5.5 Topic Section is not diverse.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
5	When searching for Books the Topic Section is very sparsely populated with topical options. For example they have German Drama but not Drama. One is way more specific and less popular than the other.	7	Flexibility and efficiency of use	3

The screenshot shows a library database search interface. On the left, there are several filter categories: AUDIENCE, FORM/GENRE, TOPIC, REGION, AUTHOR, LANGUAGE, PUBLISHED DATE, RATING, and TAGS. The TOPIC filter is expanded, showing a list of topics with their respective counts. A 'Show more...' link is visible below the list. On the right, a search result is displayed for '371.104 F and more...', which is available to borrow in some locations. A dropdown menu is open, showing a list of topics such as History, Politics and government, History and criticism, Description and travel, Criticism and interpretation, Economic conditions, Social conditions, Social life and customs, World War, 1939-1945, Black author, Foreign relations, Philosophy, Antiquities, Civilization, Women, Jews, Social aspects, Bible, Economic policy, United States, Education, Law and legislation, African Americans, Jesus Christ, Moral and ethical aspects, Political parties, Church and state, Ethics, French literature, Clergy, Aesthetics, German drama, Sociology, Technique, Printing, American drama, Elections, Buddhism, Spanish drama, Economic development, Language and languages, Friendship, Themes, motives, Folk dancing, Soldiers, and Land tenure. A 'Close' button is visible in the top right corner of the dropdown menu.

Problem:

Sometimes, users don't really know what resource name they are searching for. Thus, people will look for it in the topic sections. For example, they might want to search some information about "drama". However, it only shows "German drama" in the categories. The topics are too narrow and not popular. Also, some topics are missing, such as "Poetry". The topics are both too specific and sometimes not there at all.

Recommendation:

To let user easily searching what they want, the topics should be divided by some general topics. Then, In each topic, it could include in some small topics. For example, "German drama" should inside the topic of "Drama".

5.6 The search bar of the databases is misleading.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
6	Under Research>Articles and Databases we tried to search for Emoji, but instead of taking us to the topic, it was just a search for the name of a database or magazine.	2	Match between system and the real world	3

	But the search bar is misleading because it says Database title/description.			
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Articles & Databases

| [A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [K](#) | [L](#) | [M](#) | [N](#) | [O](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [T](#) | [U](#) | [V](#)
 | [W](#) | [X](#) | [Y](#) | [Z](#)

Problem:

When searching for a Database title/description I tried to search for a topic and description of subject matter. The database search does not allow for users to do this. It only searches the names of the databases. So a user must know what database or magazine they are looking for and preferably, the name of it.

Recommendation:

We recommend that they change the text from Database title/description to Database or Magazine name. They may also want to include a “?” so that users can get more info on how to search for the things they are looking for.

5.7 Some titles of search results of the databases are not clickable.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
7	Under Research>Articles and Databases some of the databases that came up when we searched for User Experience were not clickable on the title or icon. We had to	7	Flexibility and efficiency of use	2

	scroll down to a small like that said more info to go to the page about that resource.			
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Latino American Experience

Focused on the history and culture of Latinos from the pre-Columbian Indigenous civilizations of the Americas to the present, this database features content from over 150 titles, an image file, timelines, primary and landmark documents.

[More info»](#)



Schomburg Studies on the Black Experience

This resource provides a core collection of primary and secondary resources in Black Studies, including full-text articles, book chapters, dissertations, reference materials, timelines, images and multimedia.

[More info»](#)



In Motion: The African-American Migration Experience

Includes 16,000 pages of text, 8,300 illustrations, numerous maps, and lesson plans, this exhibition documents 400 years of migration to, within and out of the United States

[More info»](#)



T3Live (Library edition)

T3 Live, LLC, the securities trading training and mentoring company, offers an innovative educational experience in two broad channels. The more distinctive Virtual Trading Floor channel allows users to listen to professional traders in live action as they work, and to view the 'Trader Talk' chat traffic for the mentoring subscribers. The parallel Courses channel streams a curriculum

Problem:

Some titles are not clickable, but you can get into another page from “more info”. Some titles are clickable and they are link to the specific resources. With those clickable titles, there are links of “more info” as well. The logic of links are confusing people. Users are not sure where will they be lead to by the links.

Recommendation:

The information should be showed in other ways. The website’s designer should decide whether they want the titles is clickable or not. If the titles are clickable, it could be linked to the info page. In the info page, the links for specific resources could be include inside the info page. If the titles are not clickable, there should be two different icons or texts as links to “specific resource” and the “more info” page.

5.8 It is hard to read the articles of the website.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
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8	Under many of the headings the website has so much text without color or images to help guide the eye to what is important that it is hard to understand what the hierarchy of importance is for each page.	6, 8	Recognition rather than recall, Aesthetic and minimalist design	4
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The screenshot shows the 'Looking for Work?' page on the NYPL website. The page is densely packed with text and links. On the left, there is a sidebar with categories like 'Getting Oriented', 'For Job Seekers', 'Job Search and Resume Writing', 'Classes & Programs', 'For Children', 'Resources for Teens', 'Money Matters @ Financial Literacy Central', 'Using this Website', 'Brooklyn and Queens Libraries', 'Library Card', 'How To Find Things', 'Access to Other Institutions', 'Copies and Reproductions', 'Borrowing Materials', 'Computers, Internet and Wireless Access', and 'Services for Persons with Disabilities'. The main content area is titled 'Looking for Work?' and includes social media sharing options (Facebook, Twitter, Email, Print, Share), a paragraph about library assistance, a link to 'Frequently Asked Questions', a link to 'Job Search Central', a link to 'Job and Career Workshops now offered at many NYPL locations!', a link to 'Read the Job Search Central Blog', and a section for 'Job Search Assistance' with several bullet points. The right sidebar features a 'DONATE NOW!' button, an 'ASK NYPL' chat link, 'ALSO OF INTEREST' links, 'FROM OUR BLOGS' section, 'AUDIO/VIDEO' section, and 'NYPL PRINT PUBLICATIONS' section.

Problem:

The most articles of the website are hard to read and understand. The texts are designed without colors and images. Users will hard to recognize what the the hierarchy of importance for the content. There are also too many clickable texts that will be linked to other pages. It is hard to focus on the main information of the page. The page is so distracted that it is not easy to read.

Recommendation:

The content should be divided by different colors and also it is possible to add color on titles. Also, the font size should be designed differently by the hierarchy of importance. The designer should find out what is the most important part of the content and what the information that users want to know in the paragraph. Then, the site should be readable for users.

5.9 It is hard to understand and sort information on the homepage.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
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9	On the homepage they are using Masonry or something responsive with a grid of images and articles, but because they are all the same color and typeface it is hard to know what is an event, exhibit, podcast, etc.	1	Visibility of system status	3
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FREE EXHIBITION
"Somebody Come and Play"
45 Years of Sesame Street
On Now
Library for the Performing Arts at Lincoln Center



BOOK LIST
Page-Turners for All Tastes
NYPL staff recommends titles from every genre that you'll want to read in one sitting.




BOOKS AT NOON
Sam Roberts
October 29, 12pm
Schwarzman Building
The urban affairs correspondent for The New York Times comes to NYPL to discuss his latest work, "A History of New York in 101 Objects."



LIVE STREAM
George Clinton & Questlove
Begins at 6:30pm EST
October 28
Funk musician George Clinton joins musical artist and producer Questlove to share stories about Clinton's life and prolific career.

RECOMMENDED BY OUR LIBRARIANS




Recently arrived

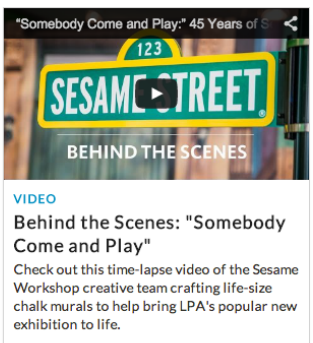
WANT THE BEST OF NYPL IN YOUR INBOX?

E-mail address [SIGN UP](#)


[Privacy Policy](#)



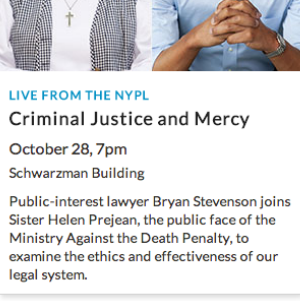
NEW PODCAST
Marjane Satrapi
The graphic novelist who brought us "Persepolis" speaks about the liabilities of learning English from American movies, the intelligence required for a sense of humor, and more.




VIDEO
Behind the Scenes: "Somebody Come and Play"
Check out this time-lapse video of the Sesame Workshop creative team crafting life-size chalk murals to help bring LPA's popular new exhibition to life.



INTERACTIVE EXHIBIT
Share Your Hurricane Sandy Stories



LIVE FROM THE NYPL
Criminal Justice and Mercy
October 28, 7pm
Schwarzman Building
Public-interest lawyer Bryan Stevenson joins Sister Helen Prejean, the public face of the Ministry Against the Death Penalty, to examine the ethics and effectiveness of our legal system.



NEW ON NYPL.ORG
Improved Locations Finder

Problem:

The homepage is kind of like the style of magazine. So many columns of contexts which are displayed in a same page. However, It is hard to know the types of the information in the first glimpse.

Recommendation:

It might be better if adding different colors in different types of information. It is also possible to add different background colors to distinguish different types of content.

5.10 The design is not consistency between the main website and the shop website.

#	Issue	Heuristic Number	Broad Heuristic	Severity Ranking
10	The library shop is slow and it has a completely different layout and color palette which begs the question is it even connected to the library and how? Where am I now?	4	Consistency and standards	2



Problem:

When loading into the shop of library site, it was very slow. Also, the website seems not belong to the NYPL.org website because it is using very different color palette. Moreover, the interface design is also different from the main website.

Recommendation:

It should at least use some same color and similar style from the main website. Also, the shop website needs to include the name of NYPL.

6. CONCLUSION

After analyzing the New York Public Library website, targeted 10 key usability issues:

1	What is the difference between NYPL.ORG and Catalogue in the search bar?
2	The Relevance in the search is not intuitive. When we searched for Harry Potter the a paperback book of Harry Potter was #10 on the search list after JK Rowling criticism and a couple French Harry Potter books.
3	The "Browse The Shelf" button does not help the user locate the book in the library, it takes you to books of a similar genre or category.
4	We found a video game sort feature under Form and Genre, but we found no top nav or direct route to get to the Video Game section of the collection.
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9	On the homepage they are using masonry or something responsive with a grid of images and articles, but because they are all the same color and typeface it is hard to know what is an event, exhibit, podcast, etc.
10	The library shop is slow and it has a completely different layout and color palette which begs the question is it even connected to the library and how? Where am I now?! http://shop.nypl.org/

We recommend that the client follow our recommended fixes for each issue and address the issues with the highest severity rankings first. The top two issues we found, with severity ranking four were the search feature (Issue 2) and the text heavy layout of the site (Issue 8). If these two main usability issues are addressed it will go a long way toward making the NYPL

website more user friendly, intuitive and approachable. A detailed description of the task, usability findings, and recommendations is available in this document in numbered sections 5.1-5.10. If you have any question about the findings or recommendations please feel free to contact either Yu-Chien or Niki directly at the email addresses provided.

7. RESOURCES

"Nielsen Norman Group." Severity Ratings for Usability Problems: Article by Jakob Nielsen. Accessed November 02, 2014.
<http://www.nngroup.com/articles/how-to-rate-the-severity-of-usability-problems/>.

"Nielsen Norman Group." 10 Heuristics for User Interface Design: Article by Jakob Nielsen. Accessed November 02, 2014.
<http://www.nngroup.com/articles/ten-usability-heuristics/>.

"What Do You Want To Find?" Welcome to The New York Public Library. Accessed November 02, 2014. <http://www.nypl.org/collections>.

8. APPENDIX A: DETAILED HEURISTIC LIST

Number	Broad Heuristic	Detailed Heuristic
1	Visibility of system status	The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
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.
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.
4	Consistency and standards	Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.
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.
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.
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.
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.
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.
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.