

Heuristic Evaluation
of the
Purdue Online Writing Lab Website

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EXECUTIVE SUMMARY

This document is a heuristic evaluation report for the Purdue Online Writing Lab Website, <http://owl.english.purdue.edu/>. The Purdue Online Writing Lab (OWL) is a well-known online resources for academic writing. The website is one of the most frequently used resource website for Purdue students providing guidelines on writing and common solutions for problems when writing papers. The website also a self-study online resource for outsiders such as grades 7-12 students and instructors. Moreover, the website provides details in academic writing for advance writers to be used as references such as citation format.

In this study, we use Nielsen's 10 usability heuristics to empirically evaluate the user experiences and inspect usability problems existing in the website. We also applied the knowledge from Research-Based Web Design & Usability Guidelines and the Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics in the inspection. Then, we give a suggestion to improve the flaws. The following is the summary of our findings.

The most typical error in usability consisted of problems with finding information (via the search box, or finding specific information in a long list for example). This website is aimed to be a resource for answering questions. However, the design of the website does not support quick answers as it should. The users have to drill down through categories in order to reach the answer.

For the design, we found that although each section has a different color scheme, this is not made apparent and since the user does not immediately know this, the user cannot use that information to help them find what they need. Also, a very poor choice in color for the site map results in a giant blue block of text confusing the reader and overwhelming the senses.

The study was a good practice for beginner usability analyzers and has allowed them to see firsthand how to conduct usability research.

INTRODUCTION

The purpose of heuristic inspection is to validate design for usability. Heuristics “teach designers about criteria to keep in mind while doing their own designs so they will not violate these guidelines.” (Hartson, 2012) A heuristic review examines the current interface and compares the interface against design principles. “This procedure both familiarizes the [design] team with the strengths and limitations of what is currently available to users, and provides a general idea of the current functional scope of the product.” (Cooper, 2007).

The site that was studied was the Purdue Online Writing Lab (OWL). The Purdue OWL is a website owned by Purdue Writing Lab at Purdue University. It is designed to provide an online resource for their on campus writing lab. The OWL website contains a variety of tools such as writing resources and instructional materials. The target groups are both Purdue students and outsiders with different writing skill levels- such as grades 7-12 students and instructors, ESL students, and other researchers. The overall goal of the site is to assist users in their development as writers.

The students of Purdue as well as other researchers need an online one-stop location for academic writing and citation guidelines. Grades 7-12 students and ESL students also need online resources to support their study. Purdue Online Writing Lab (OWL) fulfills these needs by offering an interactive website that provides writing resources. However, the design of the current website is in deep hierarchy model with inefficient searching tool. The users have to spend time in finding a piece of information. Usability inspection will be useful for the improvement of the website.

METHOD

We applied heuristic evaluation methods. Four experts inspected all sections of the Purdue OWL Website. Each expert referred to the Nielsen's ten usability heuristics and the Research-Based Web Design & Usability Guidelines as guidelines to evaluate the website. Then, the experts pointed out what principle was being violated, described the usability flaw and rated the severity, referring to the relative importance suggested in Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics. The experts also provided a suggestion for the improvement of that flaws.

The list of Nielsen's ten usability heuristics include:

- 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 users recognize, diagnose, and recover from errors**
- 10. Help and documentation (Nielsen, 2005)**

The severity ratings were created using Tullis and Albert's guidelines. They are described as:

L (Low)- An issue that does not result in a failure to perform a task. The issue is/can be annoying and/or frustrating but will still allow a user to complete a task.

M (Medium)- An issue that contributes task failure but may not be directly responsible. Users may develop different methods to get what they need but will likely be unsatisfied or annoyed by the experience.

H (High)- An issue that leads to failure in a task. There is no way to complete the task and user will likely be highly annoyed and unsatisfied. (Tullis & Albert, 2008)

RESULTS:

USABILITY RESULTS



Principle Violated	Issue and Description	Why this is a problem	Recommendation	Severity
4. Consistency and Standards	The order Traditionally, in people's mind, the list should be arranged alphabetically. However, in the sitemap, there is no defined order.	The users have to read through the list of topics in order to find the desired topic. The user have to spend extra time for that.	Sitemap sections should be ordered alphabetically and/or arranged in a more logical way that would be convenient for users to find their information.	L



Principle Violated	Issue and Description	Why this is a problem	Recommendation	Severity
7. Flexibility and Efficiency of use.	Search Box When a user wants to input some key points in the searching box, the system doesn't automatically eliminate the predefined words.	The users have do the act of deleting the words that is unrelated to the goal. It is possible that the users do not notice the word, and unintentionally include it as their input.	When you need to input some text in the search box, the system should automatically change it to a blank space.	M
7. Flexibility and Efficiency of use.	Search Box There is no advanced search function.	The users have to use the normal search which produce inefficient search result.	The system should provide users with an advanced search box , with which they can easily have the direct access to any location within the website.	L



[Purdue OWL](#) [Writing Lab](#) [OWL News](#) [Engagement](#) [Research](#) [Contact](#) [Site](#)
[General Writing](#) • [Research and Citation](#) • [Teaching and Tutoring](#) • [Subject-Specific Writing](#) • [Job Search Writ](#)

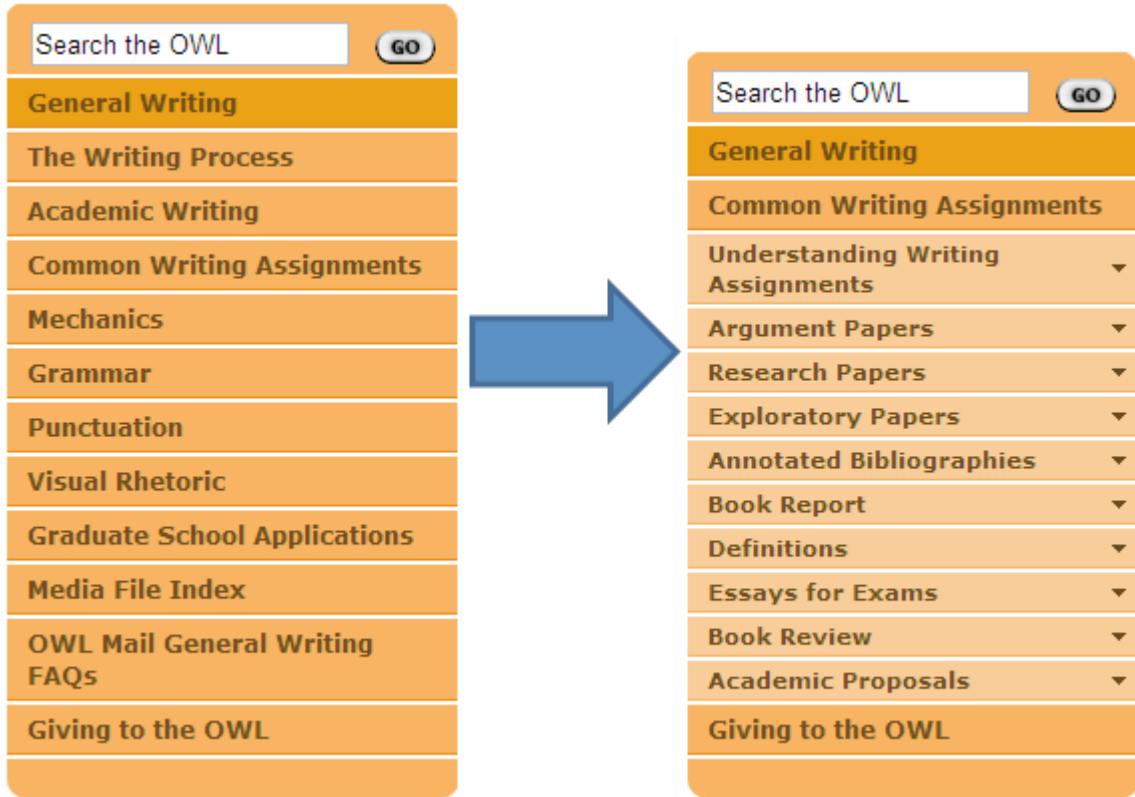
OWL Family of Sites > OWL

[General Writing](#)
[Research and Citation](#)

Welcome to the Purdue OWL

If you are having trouble locating a specific resource, please visit the [search page](#) or [Map](#).

Principle Violated	Issue and Description	Why this is a problem	Recommendation	Severity
4. Consistency and Standards	Logo Logo does not take user back to official homepage.	In users' mental model, the logo should be linked to the homepage. Since this logo does not, the users have to find other way to return to the homepage.	The logo should be linked to the official homepage.	M



Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
6. Visibility of System Status	Adaptive side menu Side menu completely changes when you make a selection. Options disappear.	The users get confused about the current position in the website. If the users need to select an option on the previous menu, they must return to the previous page.	The side menu can change, but should maintain menus from the previous page. That will avoid confusion, and the user can refer to other relevant pages easier.	M

Your Name (Required):

Your Email Address (Required):

Your Location and/or Institution (Optional):

Subject of Message (Optional):

Message:

don't provide any hint here to indicate that you didn't put the right format of email address

Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
5. Error Prevention	Email address error reminder When inputting the email in the box without the @ sign, There is no indicator that you should correct your address.	The users have to wait until all data are submitted and the server alert the error. Then the users have to fill all input again.	It should remind you that it is not an appropriate format of email address.	L

Purdue OWL Writing Lab OWL News Engagement Research Contact Site Map

General Writing • Research and Citation • Teaching and Tutoring • Subject-Specific Writing • Job Search Writing • ESL

OWL Family of Sites > OWL > Research and Citation > APA Style > APA Formatting and Style Guide

Search the OWL

Research and Citation

APA Style

APA Overview and Workshop

APA Formatting and Style Guide

General Format

In-Text Citations: The Basics

In-Text Citations: Author/Autors

Footnotes and Endnotes

References List: Basic Rules

References List: Author/Autors

References List: Articles in Periodicals

References List: Books

References List: Other Print Sources

References List: Electronic Sources

References List: Other Non-Print Sources

Additional Resources

Types of APA Papers

APA Stylebook: Avoiding Bias

APA Stylebook: Basics

APA Headings and Section

APA Powerpoint Slide Presentation

APA Sample Paper

APA Tables and Figures 1

APA Tables and Figures 2

APA Abbreviations

Statistics in APA

APA Classroom Poster

APA Changes 6th Edition

OWL Mail APA FAQs

Giving to the OWL

Suggested Resources

- MLA Guide
- APA Guide
- How to Navigate the New OWL
- Media File Index
- OWL Exercises

Reference List: Electronic Sources (Web Publications)

Summary: APA (American Psychological Association) is most commonly used to cite sources within the social sciences. This resource, revised according to the 6th edition, second printing of the APA manual, offers examples for the general format of APA research papers, in-text citations, endnotes/footnotes, and the reference page. For more information, please consult the Publication Manual of the American Psychological Association, 6th edition, second printing.

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Last Edited: 2012-09-03 10:05:42

Please note: There are no spaces used with brackets in APA. When possible, include the year, month, and date in references. If the month and date are not available, use the year of publication. **Please note,** too, that the OWL still includes information about print sources and databases for those still working with those sources.

Article From an Online Periodical

Online articles follow the same guidelines for printed articles. Include all information the online host makes available, including an issue number in periodicals.

Author, A. A., & author, B. B. (date of publication). title of article. title of online periodical, volume number(issue number if available). retrieved from <http://www.somewhere.com/full/url/secretish>. W. (2002). 10 tips on writing the living web. A list apart: for people who make websites, 142. retrieved from <http://www.alistapart.com/articles/writingliving>

Online Scholarly Journal Article: Citing DOIs

Please note: In August of 2011, the format recommendations for DOIs changed. DOIs are now rendered as an alphanumeric string which acts as an active link. According to the APA Style Guide to Electronic References, 6th edition, you should use the DOI format which the article appears with. So, if it is using the older numeric string, use that as the DOI. If, however, it is presented as the newer alphanumeric string, use that as the DOI. The Purdue OWL maintains examples of citations using both DOI styles.

Because online materials can potentially change URLs, APA recommends providing a Digital Object Identifier (DOI), when it is available, as opposed to the URL. DOIs are an attempt to provide stable, long-lasting links for online articles. They are unique to their documents and consist of a long alphanumeric code. Many (but not all) publishers will provide an article's DOI on the first page of the document.

Note that some online bibliographies provide an article's DOI but may "hide" the code under a button which may read "Article" or may be an abbreviation of a vendor's name like "CrossRef" or "PubMed". This button will usually lead the user to the full article which will include the DOI. And DOIs from print publications or ones that go to dead links with CrossRef.org's "DOI Resolving" link are displayed in a smaller location on their home page.

Article From an Online Periodical with DOI Assigned

Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
7. Flexibility and Efficiency of use.	Too much information on a page Too long pages without table of contents or inter-page linking for page.	Users must scroll down through a lot of unrelated information in order to find what they are looking for.	The website can either divide into shorter pages or add inter-page links for each section in a heading at the top of the page.	L

Structuralism and Semiotics
Postmodern Criticism
New Historicism, Cultural Studies
Post-Colonial Criticism
Feminist Criticism
Gender Studies and Queer Theory
Close Reading
Developing a Thesis
Pre-Writing
Introduction
Literature Topics and Research
Formatting
Overview
The Prompt Paper
General Research Papers
Conducting Research
Reading Criticism
Building an Argument

blank space

Intra-Paragraph Organization Presentation
Intra-Paragraph Organization Handout
Verb Use Presentation
Verb Use Handout
Macro Level Cohesion Presentation
Macro Level Cohesion Handout
Micro Level Cohesion Presentation
Micro Level Cohesion Handout
Concise Language Presentation
Eliminating Unnecessary Words Handout
Parallelism Handout
Document Design Presentation
Poster Design Handout
Group Work Presentation
Group Work Handout
Writing Proposals Handout
Annotated Sample Documents
Mechanical Engineering Writing Enhancement Program
Memo Writing
90-Second Semicolon Vidcasts
Report Writing
Creative Writing
Fiction Writing Basics
Fiction Writing Basics 2
Fiction Writing Basics 3
Pattern and Variation
Pattern

blank space

Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
8. Aesthetic and minimalist design	Blank space There are some blank space on the site map page.	Not very pleasant design when you see some huge margin different from the previous one.	It should redesign the layout of this page and let the two blank column disappear.	L

Search About 295,000 results (0.21 seconds)

Web

Images

Maps

Videos

News

Shopping

More

West Lafayette, IN

Change location

Purdue OWL
owl.english.purdue.edu/owl/
 The Online Writing Lab (OWL) at Purdue University houses writing resources and instructional material, and we provide these as a free service of the Writing Lab ...

APA Formatting and Style Guide
 APA Sample Paper - Owl/resource/560/10 - Owl/resource/560/02

APA Style
 These OWL resources will help you learn how to use the ...

MLA Formatting and Style Guide
 MLA (Modern Language Association) style is most ...

Research and Citation
 MLA Style - APA Style - Chicago Manual of Style - Using Research

Purdue Online Writing Lab
 The Purdue University Online Writing Lab serves writers from ...

General Writing Resources
 The Writing Process - Academic Writing - Grammar - Mechanics

[More results from purdue.edu >](#)

Sub-category Page

Official Homepage

Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
2. Match Between System and The Real World	Searching Searching Google for the Purdue Owl does not return the official homepage as the most important result	The information does not appear in a natural logical order, it is not the same as users' mental model.	Adjust the way that the site treats its homepage. Either remove the official homepage as unimportant and direct traffic to there first.	L
2. Match Between System and The Real World	Searching The search function utilizes Google to search everything rather than an intersite search function	It is possible for the users to get search result outside the OWL website. It is inconsistent to users' mental model.	Create an intersite search function to limit the number of results that can return from a query.	L

The Purdue Online Writing Lab (OWL)

Suggested Resources

- Site Map
- Grades 7-12 Instructors and Students
- English as a Second Language
- Non-Purdue Instructors and Students
- Purdue Instructors and Students
- Professional Writers
- Parents
- Adult Basic Education (GED, ESL, Cover Letters, Résumés)

Featured OWL Resources

Read the Purdue OWL News.

The Purdue Online Writing Lab

Welcome to the Purdue OWL. We offer over 200 free resources including:

- Writing and Teaching Writing
- Research
- Grammar and Mechanics
- Style Guides
- ESL (English as a Second Language)
- Job Search and Professional Writing

The Writing Lab at Purdue

Purdue University students, faculty, and staff at our West Lafayette, IN campus may access this area for information on the award-winning **Purdue Writing Lab**. This area includes Writing Lab hours, services, and contact information.

Most Popular Resources

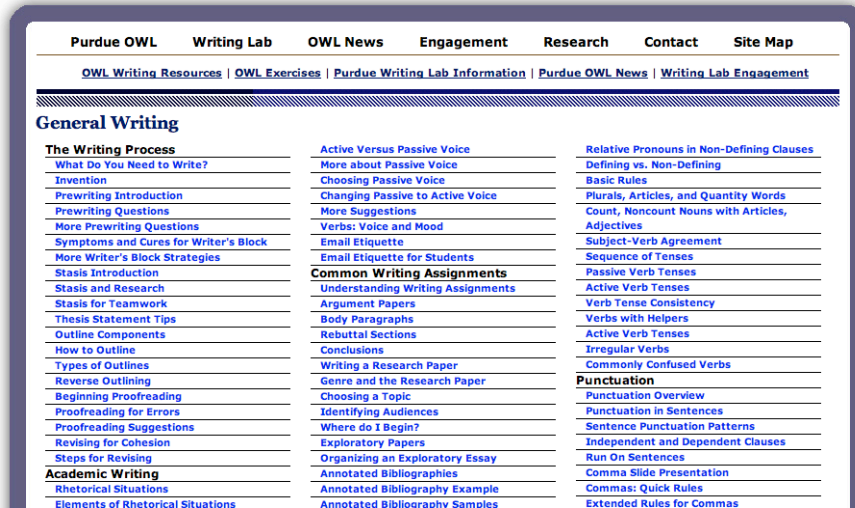
- OWL Exercises
- APA Formatting and Style Guide
- MLA 2009 Formatting and Style Guide
- Avoiding Plagiarism
- Writing the Basic Business Letter
- Developing a Résumé

Contact the Purdue OWL

Writing-related questions:
OWL Mail

Principle Violated	Issue Description	Why this is a problem	Recommendation	Severity
4. Consistency and standards	Homepage linking problem Inconsistent use on whether the logo is clickable or not.	This confuses users as to whether or not the logo is clickable navigation.	The designer should include a label or something hint near the logo to help those users who didn't realize it is the link to another page.	M
4. Consistency and Standards	Homepage linking problem The Sub-pages of the Purdue OWL do not have clickable logos to return to the homepage.	The user can not easily return to the homepage. They must use a back button.	Make all logos a link to their respective home pages and include a link to the overall homepage.	M

Design Results



Color choice for the Sitemap

Site Map border is blue. May cause user to not assume the links are actually links because everything is blue. The users may not get the affordance. The designer should choose a different color for page border. The designer can even switch the color with another section of the site's color.

Hyperlinks

The site is full of hyperlinks, making it look unprofessional or like a spam page. The designer should include a table of contents for each section. On the actual section include an interpage linking heading.

Some technical problems:

In the sogo browser the website does not display correctly. This is a common browser in China.

Issue	Issue Description	Recommendation	Severity
Compatibility with different browsers	The layout of the content doesn't show appropriately with the change of browsers.	Edit the html code and make it more compatible with different browsers.	L

REFERENCES

Nielsen, J. (2005). Ten Usability Heuristics. Retrieved from http://www.useit.com/papers/heuristic/heuristic_list.html

Tullis, T., & Albert, B. (2008). *Measuring the user experience: Collecting, analyzing, and presenting usability metrics*. Burlington, MA: Morgan Kaufmann.

Michael O. Leavitt, Ben Shneiderman. *Research-based web design & Usability Guideline*.