



amazon

Heuristic Evaluation Report

Shradha Shree
Pratt Institute

Executive Summary

Amazon, initially started as an online marketplace for books later expanded into different verticals like e-commerce, cloud computing, digital streaming and artificial intelligence. Being world's largest e-commerce marketplace, it provides wide variety of products with good deals and coupons to choose from.

The usability study of Amazon.com website was performed by using heuristic evaluation method which is a usability engineering method involving a small set of evaluators to examine the interface. For this study three usability experts from Pratt participated to evaluate the website. Evaluators performed the given task using the website and assessed it according to Jacob Nielsen's ten usability heuristic evaluation guidelines.

After analyzing the data six usability problems were identified by three evaluators. Out of these six issues two were found to be major which require improvement.

Recommendation 1: Improve visibility of the top navigation bar.

The option of "Best-Seller" was difficult to be discovered on the home page. In order to make the option more noticeable a contrasting background color can be used that highlights the button.

Recommendation 2: Convenient placement of the custom category.

Locating the "Extraordinary Finds" category required reading through many categories and scrolling to the bottom of the page. In order to improve the usage of all these categories they can be displayed at a place where it will be easy to find without much scrolling.

Making these changes to the website will not only improve the usability but also lead to increased sales.

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INTRODUCTION

Amazon.com launched in 1994 was initially started as an online marketplace for books which later expanded into different verticals like e-commerce, cloud computing, digital streaming and artificial intelligence. It is considered as one of the big four technology companies and world's largest e-commerce marketplace. It is ranked 8th on the fortune 500 rankings of the largest United states corporation by total revenue as of 2018 ([www.en.wikipedia.org/wiki/Amazon_\(company\)](http://www.en.wikipedia.org/wiki/Amazon_(company))).

The purpose of this study is to understand the usability of the website utilizing heuristic evaluation method and to see how efficiently users can find the products of their choice. This report also identifies potential usability problems and provides recommendations which require least effort in implementation.

METHODOLOGY

The usability study of Amazon.com website was performed by using heuristic evaluation method. This is a usability engineering method involving a small set of evaluators to examine the interface (interaction-design.org/literature/topics/heuristic-evaluation).

The interface is assessed using the usability principles (the "heuristics") and potential usability problems are found where these principles are violated (www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/).

The advantage of this method lies in its ability to efficiently identify usability issues in an inexpensive way as multiple evaluations are done independently at the same time (Kientz et al.,). Also, being a flexible method, it can be used on different types of interfaces with different sets of heuristics and majority of the problem can be identified using the combined effort of the multiple evaluators.

PROCEDURE

This method was performed by identifying heuristics, defining the scope of the evaluation, performing the review where each evaluator creates a list of usability problems, synthesizing the usability problem list and finally making recommendations to fix the problem.

For this study three usability expert from Pratt participated to evaluate the website. Evaluators performed the given task using the website and assessed the website according to Jacob Nielsen's ten usability heuristic evaluation guidelines (see table. 1). They reported the usability problem with its severity (see table. 2) during the process.

10 Usability Heuristics for User Interface Design		
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 are 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.

Table 1: 10 Usability Heuristics for User Interface Design

Problem Severity Rating				
0	1	2	3	4
Not a problem	Cosmetic problem only	Minor usability problem	Major usability problem	Usability catastrophe

Table 2: Problem Severity Rating

TASK

The task to be completed is presented to the evaluators as:

You are using Amazon.com website to shop for some products. You will add these products in your cart. You can do this without signing in. Below are the things you will add in your cart.

Task 1: Find two “Bestseller” Books which are also “Best book of the month” and add these in the cart.

Task 2: Find any two “Travel must-have” from the “Extraordinary finds” category and add these in the cart.

Each evaluator recorded the problem in the “Problem Description” sheet keeping in mind the Nielsen’s ten usability heuristic evaluation guidelines. For each problem the problem description, place(s) where the problem occurred, heuristic(s) violated, and severity were noted in the “Problem Description” sheet. Analysis was done for each usability problem by listing all the problems in a table and deciding on the severity rating of each problem. Detailed evaluation of these notes is in the Appendix section of the report. The final list of problems was sorted in order to the severity or importance and potential usability problems are addressed by giving recommendations.

RESULTS AND RECOMMENDATIONS

Amazon.com website offers various categories of products like health, household, clothing, shoes, jewelry etc. and also different options like best-sellers, extraordinary finds, new releases, unique gift ideas etc. All these categories and options have simple headings making it easy to understand. Also, the process to add the products in the cart is consistent and requires less steps making it convenient to order.

However, after analyzing the data from the “Problem Description” sheet, six usability issues were identified by the three evaluators. Out of these six issues two were found to be major problems which require improvement. These two problems are discussed below in detail with recommendations.

RECOMMENDATION 1: IMPROVE VISIBILITY OF THE TOP NAVIGATION BAR

The top navigation bar on the home page is an effective and quick way to search for products under categories like “Best-Seller”, “Gift Ideas”, “New Releases”, etc. (see fig.1).

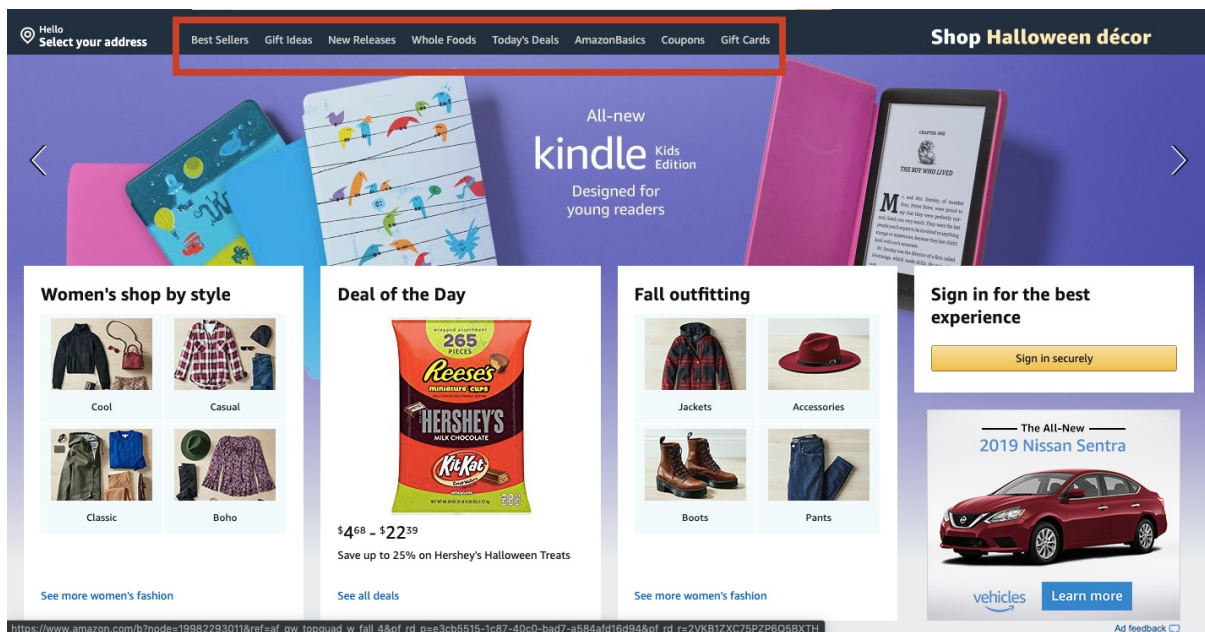


Fig. 1: Top navigation bar displaying various categories to quickly find products.

During the process of finding the best-seller book for task 1 the option of “Best-Seller” was difficult to be discovered on the home page. Though this was intended as an easy to locate option but small font size and same background color as the navigation bar

did not solve the purpose. It seemed like the only way to get to best-selling books was to navigate through all departments then books and type best seller which is a longer route.

In order to make the option more noticeable a contrasting background color can be used that highlights the button (see fig. 2). The orange color was chosen to adhere to the brand color style. Making these changes will improve visibility and consequently increase the usage of these options.

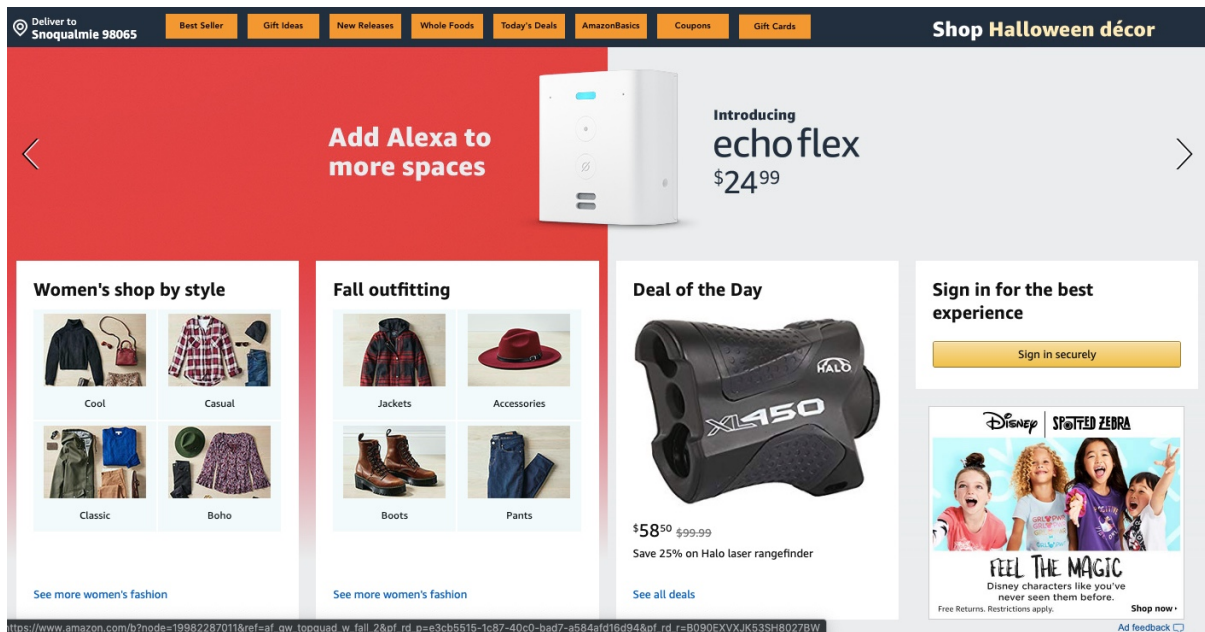


Fig. 2: Improved top navigation bar with contrasting color.

RECOMMENDATION 2: CONVENIENT PLACEMENT OF THE CUSTOM CATEGORY

Amazon provides curated list of products under collections like “Extraordinary Finds” (see fig. 3), “Device Accessories”, etc. for users who want to explore the website with no specific product in mind.

For task 2, locating the “Extraordinary Finds” category required reading through many categories and scrolling to the bottom of the page. Also, this category is not mentioned anywhere and since it is a custom category it is difficult to organize it under some hierarchy.

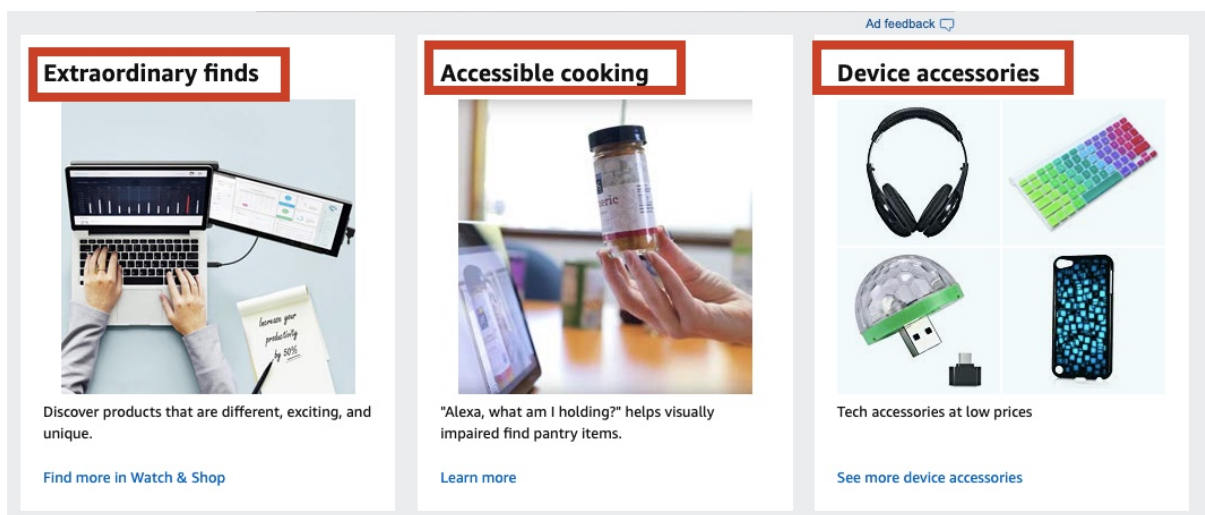


Fig. 3: Customized categories of products.

Moreover, there are other customized categories which have similar names like “find unique gifts”, “unique products” (see fig. 4) and are confusing.

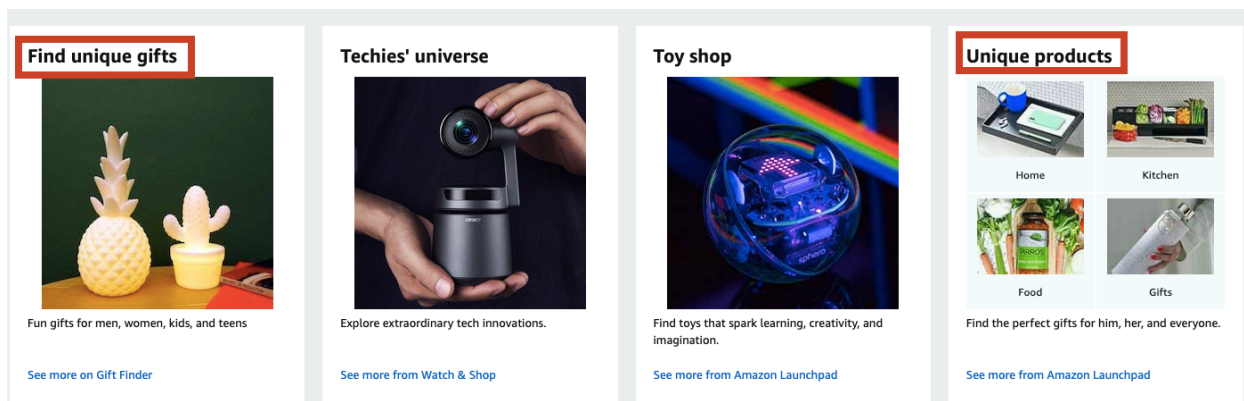


Fig. 4: Other customized categories of products with similar names

In order to improve the usage of all these categories they can be displayed at a place where it will be easy to find without much scrolling (see fig. 5). The categories which overlap like “find unique gifts”, “unique products” can be re-grouped together and can be made as one category. This will help to firstly find these categories as they are placed in a convenient place and also by grouping the overlapping categories will help to avoid confusion.

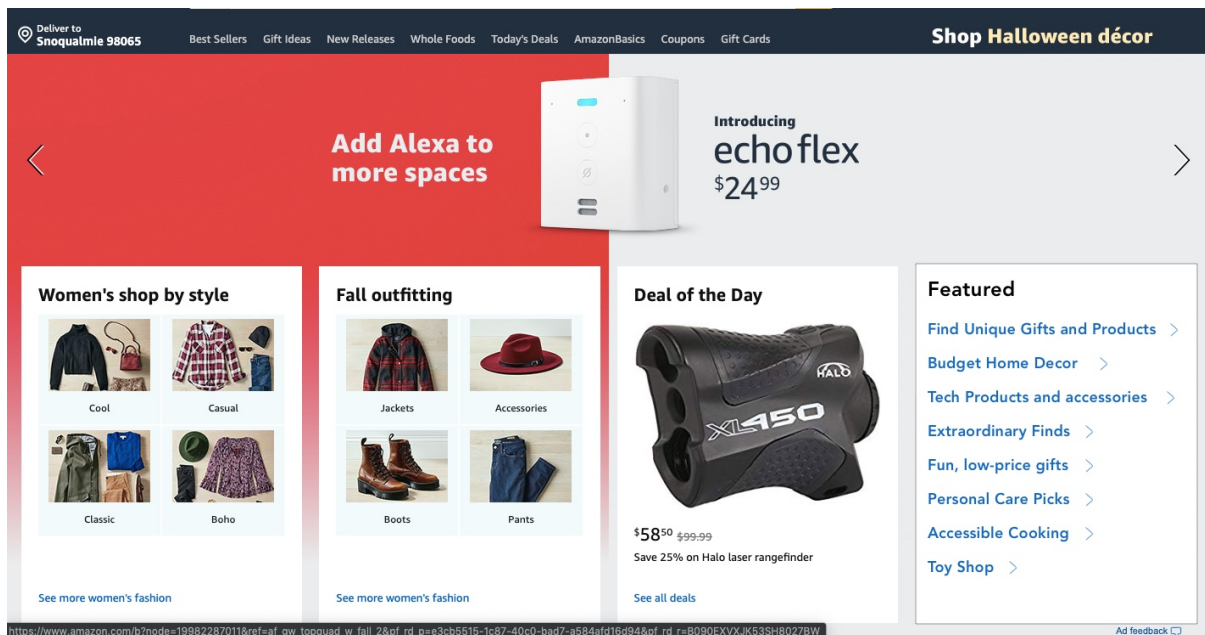


Fig. 5: Convenient placement of the featured categories

CONCLUSION

Amazon.com is an online marketplace which is used to shop different products like consumer electronics, beauty products, groceries, health and personal care, etc. They also have great deals and discounts for some of the products. These options make Amazon a go-to marketplace for people to explore and purchase products easily.

Few recommendations have been made to enhance the usability experience of the website and are as follows:

1. Improve visibility of the top navigation bar
2. Convenient placement of the custom category

Implementing these recommendations will not only improve the usability of this website but also lead to increased sales.

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APPENDIX

Usability Problem	Heuristic	Evaluator 1	Evaluator 2	Evaluator 3	Final Rating
Inconvenient to locate best-seller category on the home page as the option is not discoverable and the button does not seem to be clickable	H2, H8	3	3	3	3
Placement and visibility of the best book of the month has visibility issues	H2, H8	2			2
Cannot locate extra ordinary finds category on the home page as there does not seem to be natural order/mapping of categories on the home page	H1, H6, H7, H8	3	2	3	3
No button to go back to the search page once item has been added to the cart.	H7, H1		2		2
Inconsistency between pages "best seller & more" and "best	H4, H2		2		1

<p>book of the month". The heading seems to be similar and confusing</p>					
<p>No clear description of the travel-must have items making it inconvenient to add it in the cart.</p>	<p>H2, H8</p>			<p>1</p>	<p>2</p>