

## **Yelp Usability Testing**

The University of Maryland, College Park June  
10, 2021



Author Note:

This paper was prepared for INST 702 Usability Testing by Sai Vaishnavi Swaminathan

## **Company and Product Background**

Established in 2004, Yelp is a crowdsourced local reviews app - users can review and judge other businesses using existing users' reviews. Furthermore, users can also find events and use the interface to talk to other "Yelpers." The local business can utilize the Yelp app to register themselves and the services they provide so that users can quickly discover and rate those businesses. Its mission is to connect people with great local businesses; by doing that, they hope to improve the lives of the users and business owners. People who use Yelp are considered a valuable market to sell to as they have a higher income to spend than others. The Yelp fact sheet shows that 50% of Yelpers make more than three times the median US income (Fast facts, n.d). Youngsters are not the only target audience for Yelp. Users of Yelp come from a variety of backgrounds and age ranges. Few sources compared the corporate Yelp fact sheet to US demographic data, which shows that Yelp users mostly fall under the age range of 18 to 34, with high unrestricted income (Cocotas, 2012; Yelp statistics, demographics, users and facts for 2021, 2022; Fast facts, n.d).

This study aims to identify the pain points in Yelp's business discovery user flows, explicitly focusing more on the search and filter feature. The key objectives are:

1. To understand how users discover and evaluate businesses on Yelp and how they use Yelp's filters, if applicable.
2. To identify the pain points when using filters and ratings to refine search results.
3. To test the effectiveness, error tolerance, efficiency, and ease of using the search and filter feature and whether the results are relevant to the user's search.

With these objectives in mind, the research questions were devised as provided below:

1. What kind of search activities do participants use to find businesses? (e.g., keyword searches, filtering, tabs, etc.)
2. How do the participants find the filter options once they fire the search?
3. What is confusing or frustrating about the filters and rating metric within the experience, if applicable?

## **Research Background**

I am very fond of the Yelp website, and I use it almost every month to satisfy my food cravings. Therefore, I chose to look at Yelp to locate some points of improvement for the platform based on user feedback. Sometimes, Yelp's system becomes hard to use because of its low discoverability of valuable features and the ambiguity in its structure.

I hoped to learn how the usability evaluation method would help identify the real-time problems in the business discovery flow and the filters feature. Also, it would be interesting to understand the level of challenge in the user flows. I was also interested in knowing what works well in the interface and what improvements could be made to improve it. I was looking for information on whether the results satisfy users' needs. I was looking forward to researching Yelp, applying usability evaluation concepts, and producing good results.

The information I collected from the research provided valuable information on challenges in the existing system. Given that Yelp already has a large user base and is dedicated to being a reliable peer-reviewed online directory for local businesses, the study results would enhance user confidence in the Yelp app and further improve its competitive advantage. Furthermore, the results and recommendations gleaned from the study will enhance the app's mission, which is to connect people with great local businesses.

## **Objectives**

The objective was to determine how easy or challenging it is for users to discover businesses on the platform. I wanted to identify problems in the business discovery flow, specifically the search and filter

features. I wanted to understand how occasional and brand new users of Yelp perform everyday tasks (very important features like discovering businesses) and at least one less common task (set filters in a search query or ask a question to an establishment) to test the intuitiveness of advanced features. I also wanted to learn how participants choose to go about their search, how they use the filters, and how they choose a business utilizing the rating systems. After each task, I also wanted to ask the participants to rate their usability and whether they could quickly complete the job.

### **Participants' Information**

For this study, I focused on observing existing semi-frequent users and brand new users of Yelp as I believe that a new set of eyes will uncover many issues. As Yelp has a huge user base, I wanted the interface to appeal to those already using it, so I will also include current users since it wouldn't make sense to alienate existing users to woo new ones. I did not choose power users (frequent users of an app) as their experience would differ from an occasional user. Also, I followed industry best practices and ran my study on five users (the Nielsen Norman Group points out that a sample of 5 users can uncover 85% of a website's issues).

Because Yelp users come from various backgrounds, I was not focusing too heavily on age and gender (based on the analysis of typical Yelp users (Yelp statistics, demographics, users, and facts for 2021, 2022). As per Yelp statistics, the US has 41.9% of users between 18 and 34 years old (Yelp statistics, demographics, users, and facts for 2021, 2022). Over 37% of users fall between 35 and 54 years old, and 19.9% are older than 55 (Yelp statistics, demographics, users, and facts for 2021, 2022). Also, 60% of Yelpers have some college education (Yelp statistics, demographics, users, and facts for 2021, 2022; Fast facts, n.d). Since most of the users of Yelp are college graduates, I also selected users who have completed their undergraduate studies or are pursuing higher education and are sound with technology. The users that I recruited had different income levels. Also, I wanted the participants to perform various tasks on Yelp, so they might need access to an account. Thus, the test base will be divided into two types: one with Yelp accounts and one without. To eliminate the possibility of power users, those with Yelp accounts were users who had spent less than six months on the platform. Finally, for a hassle-free remote testing experience, I planned to test Yelp's website on desktops, not mobile devices. I also recruited some participants who have experience using Yelp's competitor products. Some of the competitors of Yelp are Google, TripAdvisor, Yahoo!, OpenTable, and Foursquare.

Finally, I selected participants from Internet forums and message boards because they provided a reliable recruitment method for such a qualitative study. As a student researcher, I believe relying on niche forums and message boards to find participants is a cost-effective method as it's too hard to recruit using more broad or traditional methods. In my experience, recruiting strangers from internet groups would eliminate any potential bias because if I had relied on my contacts (convenience sample), they would have some relationship with me and may be reluctant to give honest feedback. Considering this method runs a high risk of sampling bias or groupthink, I prevented it by identifying the target audience using screeners and conducting one-to-one sessions to garner personal insights. One challenge I predicted in the test session was when participants tried to modify their behavior due to my presence. I avoided this by building rapport with my participants using effective ice breaker strategies.

### **Research Methods**

The research method I used in this study is moderated usability testing. I chose moderated usability testing as it provided more significant benefits than unmoderated testing, such as clarifying ambiguities and asking users for more information about their perspectives. I chose this specific method to understand the end-to-end business discovery flow as the participants performed the timed tasks. This will help me collect qualitative and quantitative data about the workflow, thus paving the way for unearthing the critical issues in the user journey.

The usability test consisted of an introduction, a series of tasks, and a short interview for asking the post-test questions. The participants were instructed to 'Think Aloud' and share their thoughts throughout the test. Following the task series, I gathered the users' responses and asked additional questions about their experience with Yelp. The test concluded with an opportunity for further, open-ended comments on Yelp's usability and the administered test in the form of post-test questions, which provided additional opportunities for qualitative insight.

It took users between 30 and 40 minutes to complete the usability test. I followed the template below for all five usability test sessions.

**Introduction: 2 Minutes**

The introduction explained the participants' rights, roles, and responsibilities. Also, it included a short series of warm-up questions to build a rapport with the participants.

**Tasks: 20 - 25 Minutes**

The task list guided the participants through a series of use case scenarios. In this portion, I collected data on time spent completing the tasks and the success rate, but the additional data came from 'think aloud' comments provided as feedback.

**Post-Test Questionnaire: 5-8 Minutes**

Following the tasks, I asked the participants several post-test questions about Yelp's usability and experience.

**Screener Survey**

The primary criteria for screening the participants for the usability study were as follows:

- Never or seldom-used Yelp, or were relatively new users of Yelp (less than three months)
- Experience with online video chatting tools and web browsers

As mentioned previously, due to constraints in time and resources, I recruited participants for my study from internet groups and message boards. I contacted members of the social media platform or internet group, and I asked for permission from the group's moderator in advance. I gained initial consent, then shared the screener survey in the google forms format through the same social networking site. The final version of the screener survey is available below.

**Participants' Screener Survey for Yelp Usability Test**

Established in 2004, Yelp is a crowdsourced local reviews app - users can review and judge other businesses using existing users' reviews. Furthermore, users can also find events and use the interface to talk to other "Yelpers."

In this study, I am trying to understand the user experience of Yelp's website, and if Yelp's mission and values are easy for non-business users to understand, and if the entire customer experience is hassle-free. I am looking for participants who wish to participate in this usability study and share their feedback. Please fill out the screening survey below (it takes about 5 minutes), and I will send you details about the 1-hour remote video usability testing session upon selection. The participants in this study will be accessing Yelp from its website.

Thank you for your interest in the survey. Though I will not compensate you for your contribution, I greatly appreciate your time and response. Please note that all the answers to the below questions will remain confidential.

Please feel free to email me (sswamin1@umd.edu) in case you have any questions.

**Demographic Information**

Question	Question Type	Importance
What is your name?	Short answer	Required
What is your age? 1. Under 18 2. Between 18 - 24 3. Between 25 - 34 4. Between 35 - 44 5. Between 45 - 54 6. Above 55	Multiple choices	Required
Please specify your gender 1. Female 2. Male 3. Non-Binary 4. Transgender 5. Intersex 6. I don't identify with any gender 7. I prefer not to say	Multiple choice	Required.
What is your highest education level? 1. No schooling completed 2. Nursery school to 8th grade 3. Some high school, no diploma 4. High school graduate, diploma or the equivalent (for example, GED) 5. Some college credit, no degree 6. Trade/technical/vocational training 7. Associate degree 8. Bachelor's degree 9. Master's degree 10. Professional degree 11. Doctorate degree	Multiple choice	Required
Are you located in the US? 1. Yes 2. No	Multiple choice	Required

**Yelp Usage Information**

Question	Question Type	Importance
Do you have a Yelp account? 1. Yes 2. No	Multiple choice	Required
How often do you use Yelp? 1. Everyday	Multiple choice	Required

2. A few times a week 3. A few times a month 4. A few times a year 5. Never		
Will you be interested in using Yelp in the future? 1. Yes 2. No 3. Maybe	Multiple choice	Required
Do you have experience using Google search, TripAdvisor, Yahoo!, OpenTable, or Foursquare? 1. Yes 2. No	Multiple choice	Required

### Remote Test Session Information

Question	Question Type	Importance
Which of the following web browsers do you have experience with? Select all that may apply. 1. Firefox 2. Safari 3. Microsoft Edge 4. Google Chrome 5. Other	Checkbox	Required
Are you comfortable with Zoom or Google Meet for the test session? If not, provide any other video chatting tool that you would prefer. 1. Yes 2. No 3. Other	Multiple choice	Required
Should you be qualified for this study, please specify the best way to contact you (e.g. phone, email).	Short Answer	Required
Are there any comments, concerns, or questions you would like to share?	Short Answer	Optional

### Research Timeline

Stage	Start Date	End Date
Identify product and background research	Jun 1, 2022	Jun 5, 2022
Research plan	Jun 6, 2022	Jun 12, 2022
Recruitment of users	Jun 13, 2022	Jun 19, 2022

Preparing task list and test plan for the remote moderated usability test	Jun 20, 2022	Jun 26, 2022
Conducting test sessions	Jun 20, 2022	Jun 26, 2022
Conducting test sessions	Jun 27, 2022	July 3, 2022
Extract findings and provide recommendations	July 4, 2022	July 8, 2022

### **Invitation**

I contacted some followers of Yelp, Open Table and Yahoo on Reddit and some new active group members of Yelp in Quora to gain consent for their participation in the usability study. I initially sent the screener survey to around 12 members who seemed interested and responsive to taking part in the study. After receiving the responses to the survey, I filtered participants who were brand new and semi-frequent users of Yelp and sent the below invitation mail so that they could select a suitable time for them to attend the usability study and to gain their consent.

Hi [Name],

I am a student doing Masters in Human-Computer Interaction at the University of Maryland, and I am working on a project to improve the Yelp website's experience. I will collect your feedback by asking you to record your experience over Zoom and answer some questions.

The session will last about 30 - 40 minutes. To participate, please sign up for the time slot below.

<https://calendly.com/sswamin1/yelp-usability-test>

Please access the consent form below.

<https://forms.gle/nt7mUqSpRqV7eozP9>

Please take this study in a quiet place, such as an office or home.

I am looking forward to it!

Thanks,

Sai Vaishnavi Swaminathan

### **User Profile**

Details	User 1	User 2	User 3	User 4	User 5
Age range	18 to 34 years	18 to 34 years	35 to 55 years	18 to 34 years	35 to 55 years
Gender	Male	Female	Female	Female	Female
Education level	Masters degree	High school graduate	Bachelor's degree	Bachelor's degree	Masters degree
Device	Desktop computer	Laptop	Desktop computer	Laptop	Laptop

How often do they use Yelp?	A few times a year	A few times a year	No prior experience with Yelp	No prior experience with Yelp	A few times a year
How long have they been using Yelp?	Less than six months	Less than six months	New user	New user	Less than six months
Do they have a Yelp account?	Yes	Yes	No	No	Yes
Other apps	Google Search, Yahoo	Google Search, Open Table, Yahoo	Google Search	Google Search, Open Table	Google Search

### **Usability Test Script**

While I was waiting for the participants to fill out their availability information, I prepared the usability test script for the test session.

The test objective was to measure the following:

1. Can the participants correctly enter the search criteria in the correct fields?
2. Once they find the initial search results, can the participants refine them further using the available filters?
3. Can they edit the search criteria and filter fields to acquire the targeted results when they cannot find the apt search results?
4. Can the user understand the critical information on the business information page upon finding the targeted results? Are they able to scan reviews and learn more about the business?
5. Can the users quickly identify and use other advanced features like saving favorite restaurants, posting reviews and photos, etc.?

The consent form was provided to each participant before the test, clarifying their roles, responsibilities, and rights. The usability tests were held between June 30th and July 4th, with five participants in total. The test scenarios and post-test questionnaires below offer quantitative and qualitative insights into how well participants understand Yelp's tools.

### **Introduction**

Hello and welcome to the Yelp usability test session. Thank you for your participation. This usability test session aims to determine how easy or challenging it is to find information about businesses on the Yelp platform.

### **Reiterating participants' rights and privacy**

Your participation in this test is voluntary, and you are allowed to leave at any time. The responses and results from the session will be confidential. You have provided consent to participate in this study and to record the session for our analysis.

### **Clarifying the role of the participant**

I will ask you to complete a series of tasks online using the Yelp website and record your responses. Upon completing each task, I will ask you to rate the difficulty level. You must think out loud when you are performing the tasks so that I understand how you are performing. I may sometimes stop and ask you to elaborate on specific actions for better understanding.



## **Ice Breaker**

How outdoorsy are you as a person?

What is your favorite outdoor activity?

If you want to explore any new place, how would you go about finding it?

Do you use any online platforms for searching for new places in the area? If so, which ones?

## **Tasks**

Today we will use Yelp.com, an online tool for finding businesses in your area. I will ask you to complete a set of tasks on the site to understand better how you experience the website. Please try to think out loud as much as possible and share with me what is going on in your mind.

The task list is as follows:

1. Imagine that it's your friend's birthday. Search for a potential restaurant [Open 6 PM current night | Serves Chinese | Around \$20/person | Near the Prince George Plaza, MD | Has five stars]
2. Filter restaurants with a happy hour for alcohol, free Wi-Fi, and suitable for children.
3. Save one restaurant for later while continuing to look at restaurants.
4. Now that you selected a restaurant. Find how you can share this business information with your friends.
5. You get to the restaurant, and the waiter lets you know that the business offers 10% off on the total order if you check in on Yelp. Find out how you can do this on Yelp.
6. Your food arrives, and you think it's an excellent presentation. Next, identify where you would post the photo on Yelp.
7. You don't have big plans for the weekend, but you are looking for something to do with your friends. You want to check out the local happenings (like a concert, play, or any other event) on Yelp. Perform a search to see if any events are happening near you on Yelp over the weekend.
8. You are returning home after vacationing in Seattle, Washington. You want to share your thoughts about the Chihuly Glass Museum. Identify where you would write a review for this on Yelp.
9. Imagine that you are driving through Washington D.C, and your car makes a strange noise as you are about to stop for the night. Someone recommends Capitol Hill Auto Service. Find out if the shop is open at 8 PM on Wednesday.
10. Before going to the Capitol Hill Auto Service, you want to check if they replace brake pads. Go on Yelp and ask this auto service shop a question to enquire if they do this.

## **Post-test questionnaire**

1. What do you like about the website?
2. Are there any aspects of the experience that could be improved?
3. What was the worst thing about your experience?
4. Do you have any other comments that you would like to mention?

## **Test Environment & Equipment**

To perform the usability test, the following equipment and test environment were required: an internet-connected laptop or desktop computer with camera capabilities, zoom software with permission to share screens, a note pad for the facilitator, usability test scripts, access to a power source.

## **Synthesis**

I evaluated the usability test using the following measures:

## **Qualitative Measures**

1. The comments from the participant's 'think aloud' action
2. Observation of the participant's performance of the tasks
3. Observation of the errors made by the participants while doing the tasks

4. Observation of the participant's feedback when navigating to pages on Yelp
5. Observation of the participant's response to follow-up questions
6. Any other responses and questions prompted by the participants

#### Quantitative Measures

1. Task success performance metric
2. Responses to post-test questions

#### Task Success usability metric

I selected the task success rate because it is simple and straightforward. Moreover, I felt that it is an essential measure of usability, as users are expected to be able to discover, filter, and sort Yelp results effectively. Thus, everything else is irrelevant if the users can't accomplish the primary tasks. Therefore, I used the task success metric for this purpose.

	User 1	User 2	User 3	User 4	User 5	Average
<b>Task 1</b>	1	1	0	1	1	80%
<b>Task 2</b>	1	1	1	1	1	100%
<b>Task 3</b>	1	1	1	1	1	100%
<b>Task 4</b>	1	1	1	1	1	100%
<b>Task 5</b>	1	1	1	0	0	60%
<b>Task 6</b>	1	1	1	1	1	100%
<b>Task 7</b>	1	1	1	1	1	100%
<b>Task 8</b>	1	1	1	1	1	100%
<b>Task 9</b>	0	1	1	1	1	80%
<b>Task 10</b>	0	1	0	1	1	60%
<b>Average</b>	80%	100%	80%	90%	90%	88%

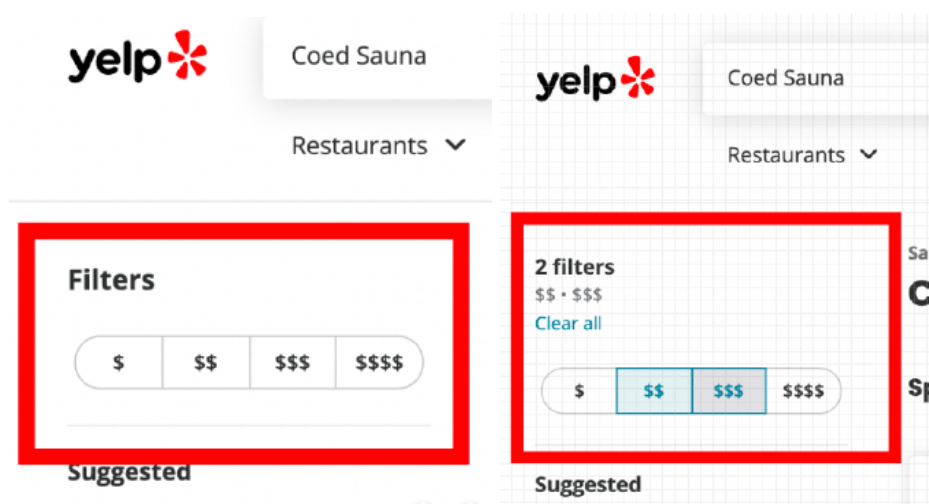
I utilized the task success rate, errors made by the participants, and the comments to identify patterns in the tasks performed. I gleaned the following insights after the analysis of the study.

## Findings

1. Some of the inexperienced Yelp users could not identify the presence of two separate search fields and correctly entered the name of the business in the first search field but failed to change the location after previous tasks. Some entered both the location and business name into one bar. This resulted in incorrect search results



2. Some of the users had trouble with Task 1. Task 1 stated that they needed to find restaurants that cost 20 dollars per person. When trying to refine the search based on the cost, they failed to do it because they did not identify this option on Yelp. There is an option to select the price range on Yelp, which is designated by a \$ symbol. Unfortunately, many users did not understand this and failed to refine the search based on the cost criteria. The users weren't sure what the dollar signs meant because they did not even have a 'price' label. Instead, it just says Filters. Few expressed concerns about the 'relativeness' of the dollar signs. It was unclear to participants whether the dollar signs represented the overall cost of the menu or the cost of the most expensive item.



3. Nearly three out of five users expressed frustration and confusion when seeing sponsored search results that did not match their keyword or filter selections. One of the participants commented, *"This is not Chinese! Why is it showing me this? And this place is nowhere near me. I think they are sponsored, but that's weird."*

### Sponsored Results



## **Recommendation**

Search, and filters are a big part of the business discovery process that Yelp is famous for. They have added a great set of filters that help users refine the search process. However, due to the lack of visibility of these filters, many users failed to find them and even commented in the satisfaction questions that they need a better filtering system. So, I suggest the following changes in the user interface for better user experience.

## **Solution**

1. There were user errors in the search bar because they did not understand the distinction between two search boxes with different purposes. This is because of the consistent and horizontal look of the search boxes. A simple solution is to have these two search fields with proper labels in separate rows with a large labeled search button. Doing so would draw attention to the fact that the fields are different and prompt the user to fill them out separately.
2. The entire price filters must be labeled as 'Price Filters', and each symbol like \$, \$\$, \$\$\$, and \$\$\$\$ must have a description indicating the price range they denote. Additionally, an absolute price range for food would be appropriate instead of just dollar signs. To eliminate any confusion regarding the relative affordability of a restaurant, it would be beneficial to offer an option like "Entrée \$10-\$15".

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