

YAHOOERS: ANALYSIS AND REWORK OF THE CURRENT YAHOO HOME INTERFACE

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ABSTRACT

Yahoo, once a digital pioneer, currently faces a severe dilemma. With an outdated user-interface, it has aged poorly and fails to keep up with the increasing expectations of users, leaving it to dust behind competitors. A couple of major fixes/developments have been proposed by the Yahooers include adding a new splash screen for accessibility options, declutter/reorganize the homepage, and improve functionality/usability. To address such issues and develop suitable solutions, the team has decided to conduct surveys to determine the main issues users are facing when it comes to Yahoo's current interface. With results back, it was determined that the prototype developed by the Yahooers' was much improved when compared to the existing interface.

INTRODUCTION

This semester our group was created with the task to start a project to better our understanding of a user centered design. This was accomplished by the selection of a current website that we found was lacking in terms of its UI. Throughout the semester our group would then improve upon its UI and expand its functionality to better fit the current day requirements for a website to survive on the internet. For this project our group decided upon improving Yahoo.com as it was a successful website that we believed could be overhauled to a thriving one. With our website decided our group worked on improving Yahoo.com in four distinct phases:

Phase 1: Project Proposal

The first phase of our project was centered on the creation of a proposal on why we believed Yahoo.com was a website that should be improved upon. Yahoo was chosen as it was an already semi-successful website that with only a minor redesign could be improved to a massively successful one.

Phase 2: Gathering User Requirements

Our second phase of our project centered on gathering user requirements, or in other words, gathering data on how to improve Yahoo. At the start of phase 2 we constructed a variety of personas and scenarios we expected our Yahoo users to be in. We then created a hierarchical task analysis on what tasks we expected our users to engage in. Using this we then constructed two data gathering schemes, interviews and surveys. With the data gathered we discovered what areas users felt Yahoo was lacking and what areas Yahoo did not need improvement in.

Phase 3: Interactive Prototype

For our third phase we used the data gathered from phase 2 to create an interactive prototype of an improved Yahoo website. We constructed the prototype on figma and included details on what new features had been implemented and instructions on how to use said features. We also included a list of limitations on the current Yahoo Prototype.

Phase 4: Usability Evaluation, Final Report, & Presentation

The fourth and final phase of our project was mainly situated on publishing our work and what we did with Yahoo as well as evaluating our prototype. We evaluated our prototype with a Focus group of 7 participants. Additionally, we created a presentation on what we did and wrote a final report that included all limitations and improvements that could be made with our project.

LITERATURE REVIEW

As a group, we have decided to address our main issues identified with the current interface of Yahoo and critique them against numerous literary articles in order to identify our main problems and how they stand against numerous standards, with that came the following results:

- 1) According to Teran Vela (2018), the absence of clear indications for user login and the complexity in finding the settings page undermine effectiveness and hinder ease of learning, impacting learnability and memorability. This difficulty in navigation is particularly pronounced for first-time users and those returning after an extended period of non-use. Additionally, Munir et al. (2019) emphasize that consistent placement of interface elements across various pages is a crucial strategy for enhancing system memorability.
- 2) According to Rohrer and Boyd (2004), a critical aspect of a user-friendly platform lies in its enjoyability, directly influencing customer satisfaction. Unfortunately, this essential connection is absent on Yahoo's homepage, which is attributed to two primary issues: intrusive advertisements and a lack of customization. The homepage appears cluttered, overwhelmed by many articles, weather reports, scoreboards, and more, attempting to convey too much information within a confined space, resulting in visual strain. Moreover, the intrusive ads compound the problem, seemingly controlling the remaining minimal white space. Rohrer and Boyd (2004) highlight how certain forms of online advertising have increasingly become disruptive and irritating to users, tarnishing advances in user experience achieved through good design or enhanced usability. The research underscores the detrimental impact of ads on the user experience, diminishing its overall quality.
- 3) As Siang (2022) highlighted, a crucial element of user enjoyability is understanding user needs and delivering relevant information. Unfortunately, Yahoo's homepage falls short in this aspect due to the absence of customization options. Unlike its competitors, such as Google, which excels in providing extensive customization features like dark mode and a web store, Yahoo lags significantly. The disparity is evident in comparing web browsers, where successful ones offer comprehensive settings pages, a feature notably absent from Yahoo's homepage. A dedicated settings button would allow users to personalize and tailor their experience on Yahoo's platform. In alignment with Siang's (2022) perspective, Yahoo's homepage needs to meet the essential criterion of delivering information that aligns with user needs, hindering its overall enjoyability.
- 4) Wadekar (2023) highlights Yahoo's homepage challenges in accessibility, citing a lack of crucial features like text-to-speech for individuals with visual impairments. This oversight impedes user interaction and hinders Yahoo's potential benefits, such as broader audience reach, improved engagement, legal compliance, and safeguarding the company's reputation (Ksennia & Julia, 2023). In neglecting these accessibility options, Yahoo faces a substantial obstacle to its website's success.

PROBLEM STATEMENT

Yahoo in its current iteration is woefully lagging behind the times in terms of its website's layout and design. It violates numerous principles of design and is in dire need of improvement if it is to remain a viable and active website in today's internet landscape. The biggest areas in which Yahoo is lacking are these three: Accessibility, Enjoyability, Usability and Features to stand out from its competition.

Accessibility

The Yahoo Website is facing a massive lack of in the principle of Accessibility. As it currently stands Yahoo has no options to use voice input to search or read webpages aloud making it so that any users who are blind cannot use Yahoo in any way by themselves. The lack of audio assistance is baffling as such technologies are a staple in its competitors (Wadekar, 2023). Additionally there are no options to adjust text size, or color making many people with a form of visual impairment unable to use Yahoo as well. In fact, it can be said that Yahoo has no accessibility options or support at all.

The lack of Accessibility only serves to harm Yahoo as by not having accessibility it cuts off the website's reach for larger audiences. Additionally, accessibility can improve user engagement with the website. By ignoring Accessibility Yahoo could potentially face legal charges as well as hold itself back from a larger market (Ksennia & Julia, 2023).

Enjoyability

The relationship between user enjoyability and Yahoo's interface is riddled with issues. The greatest breach of enjoyability can be seen in two major problems: intrusive ads, and lacking customization. Simply put the homepage is overfilled with unneeded information from articles, the weather, sports scores, and more. It is too much for the average user to keep track of. This is not helped by the fact that intrusive ads also take up a significant space. All of these disrupt and undermine the user's experience with the website (Rohrer & Boyd, 2004).

Usability

Yahoo's Usability is in need of massive improvements. For instance its navigation is cluttered and difficult to use, especially as the interface changes depending on where the user navigates to, violating the design principles of consistency (Munir et al., 2019). Not only this but accessing key features for Yahoo is difficult. For instance accessing the settings page is challenging especially for first time users thus violating the principles of effectiveness and learning (Teran Vela, 2018).

Distinctive Features

Compared to all of its competitors there is no reason for a user to switch over from their website to Yahoo. Yahoo has no original features to make it in any way stand out from its competition. In fact, there are a variety of features where Yahoo lags behind. For instance, Yahoo lacks a night mode or any form of user customizability. If Yahoo seeks to grow its user base it needs to give a reason for users to switch over to use it.

In summary, Yahoo needs to be improved in terms of accessibility, usability, enjoyability, and distinctive features. All of these fields in which Yahoo is lackluster will need to be improved so that Yahoo can be promoted from its current status as a second-rate search engine to a potential competitor to google.

GATHERING USER REQUIREMENTS

In order to gather user requirements, firstly, the type of users for this new interface design is identified and stated as below:

User Types

1. Frequent users: engage with the platform regularly
2. Infrequent/new users: visit periodically or for the first time
3. Users with accessibility considerations

Additionally, it is important to consider these following aspects when considering the user types:

- Demographics (age, education, nationality, etc.)
- Interests, goals, and values
- Mental/physical limitations

With these characters identified, three personas were crafted with different frequency usage and accessibility needs to further solidify the user requirements for the prototypes (appendix 1). Based on the personas created, possible tasks that the user may want to perform were identified and used as the basis for scenarios (appendix 2) and HTAs (appendix 3). The user tasks are the following:

1. Users should be able to change the interface's language.
2. Users should be able to personalize content shown on the interface.
3. Users should be able to change the interface's theme (e.g., light/dark mode).
4. Users should be able to change the interface's text size.
5. Users should be able to configure accessibility settings.
6. Users should be able to search with voice input.

The two techniques that were used to gather user requirements are surveys (appendix 4) and semi-structured interviews (appendix 5). Surveys were used because it is a suitable data gathering method for collecting a large amount of data to gain a general understanding of user requirements and expectations when redesigning Yahoo's home page. It is also cost-effective, anonymous, structured (easily quantified and categorized for analysis) and scalable. Three semi-structured interviews were used after survey responses were collected. This technique is used to gather feedback on the prototypes because it gives higher quality (qualitative) responses with a more reliable data set. For both of the data gathering

techniques, low fidelity sketches were created using the Balsamic framework to showcase proposed solutions for the problems that were addressed (appendix 6). The results of the survey and interviews are the following:

Survey

- Responses and Demographics:
 - There were 166 results gathered from the survey, which predominantly consisted of Asian individuals aged between 19 to 25 years. This demographic mainly included students without visual impairments or ADHD, and the majority identified as female.
 - Additionally, there were a noticeable number of North American participants, aged 36 to 50, working full-time, and experiencing near-sightedness.
- Main Findings and Results:
 - Participants showed a preference for Google over Yahoo, with lack of familiarity and infrequent visits to Yahoo's services (appendix 7). The most popular Yahoo services among the respondents were search, mail, and news. Yahoo was generally rated as below average to average, indicating a need for improvement in user perception and engagement.

Interviews

- Demographics and Backgrounds:
 - The interviewees included a 20-year-old Middle Eastern man living in the USA, a 21-year-old Asian university student, and a 44-year-old of Middle Eastern-Asian descent with a master's degree. Their fields of study and professional backgrounds varied, from business, data science, computer science, and business management.
- General Positive Comments:

- The moving carousel feature was well-received for its user-centric design and interactivity. The ability to personalize content and the addition of a settings button were highlighted as significant positives for the new design. The smart use of space was also appreciated, alongside the accessibility popup's "read-text" feature and its non-intrusive design.

- General Negative Comments:

- There have been concerns regarding the lack of distinction between settings and customization as well as the lack of further personalizing choices. There were criticisms of the UI being cluttered and a need for the addition of a news filter. Although beneficial, the accessibility popup was perceived as perhaps bothersome when logging in on different devices and did not provide a real-time preview of interface modifications. In order to lessen clutter and increase user-friendliness, there were also recommendations for improving the arrangement and design, particularly with regard to the settings menu.

Given the feedback received from both surveys and interviews, the prototypes were edited and medium fidelity prototypes were created.

PROTOTYPE

Based on the results from gathering user requirements, Yahooers have created a new high-fidelity prototype using Figma. The prototype gave study participants an environment to interact and evaluate the three main tasks they can accomplish with the interface, albeit with some limitations. It addresses the need for enhanced accessibility, better usability, and heightened customization through the following three features, which the participants will evaluate:

1. Accessibility
2. Search/AI

3. Widgets

Accessibility

To tackle Yahoo's lack of accessibility and to make it more usable to a broader audience, the prototype contains an accessibility setup where users can pick and choose options that they may need. The setup can be accessed in two ways:

1. Opening Yahoo up for the very first time (figure 1).
2. Through settings (figure 2).

In the setup, options can be toggled on/off or adjusted left/right as the user needs. These accessibility options will be saved if the user chooses to apply them (figure 3).

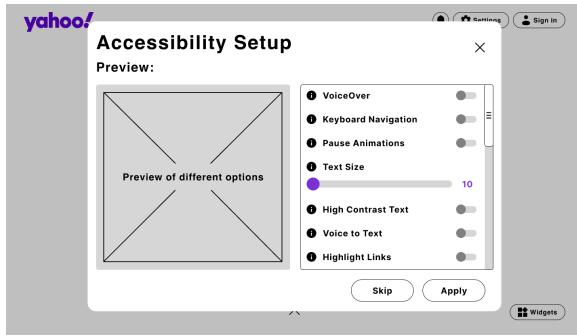


Figure 1. Accessibility setup displayed when users open Yahoo for the very first time

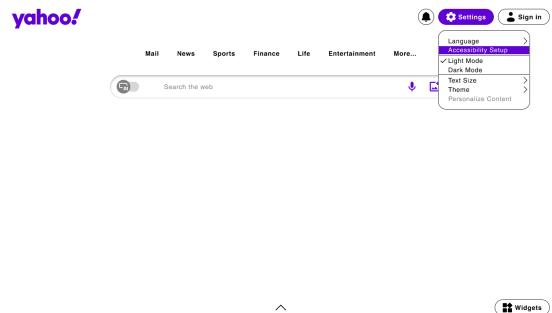


Figure 2. Settings

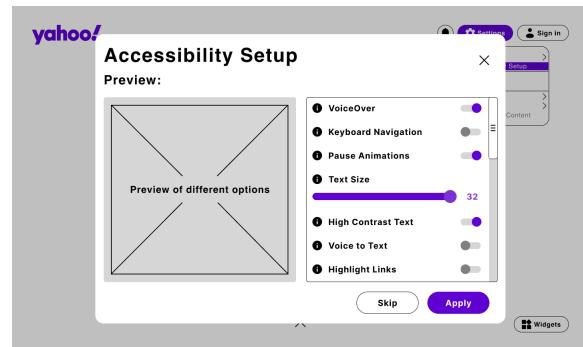


Figure 3. Applying and saving accessibility options

Search/AI

Yahoo's search bar has undergone significant transformation in the prototype for better usability, enriched user experience, and enhanced user engagement. In addition to its usual search functionality, the search bar now has a toggle for turning AI chat mode on/off (figures 4 and 5).

The AI chat mode is engineered to have access to all, if not most, of Yahoo's services, and users can use it as a digital assistant to perform a wide range of tasks. If the usual search feature is used when users want a quick and direct search experience, then the AI chat mode is used when they want a conversation and interactive approach to using Yahoo services.

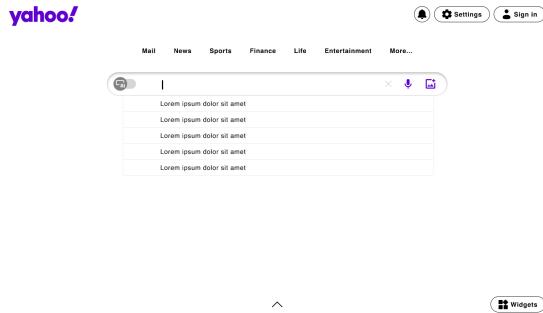


Figure 4. Yahoo search interface

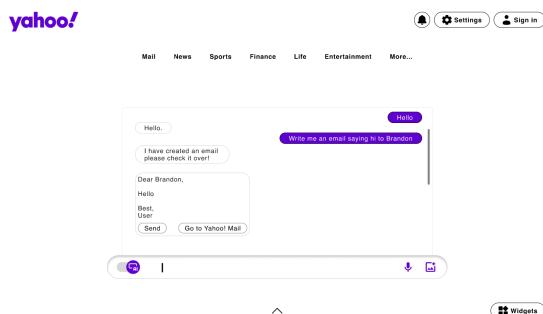


Figure 5. Yahoo AI chat interface

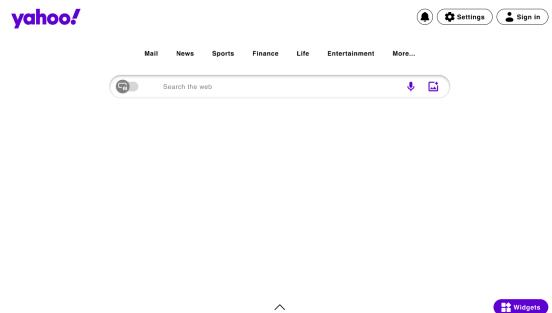


Figure 6. Landing page with the button to open the widget customization menu

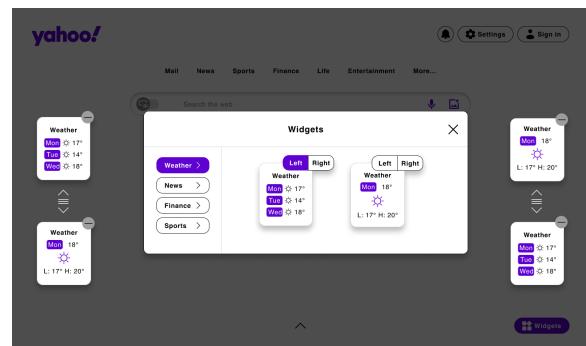


Figure 7. Widget customization menu

Widgets

The interface for the landing screen was minimized only to contain the search bar so that the home page is less cluttered. As a result, many services and content that Yahoo once integrated into the home page were removed. However, removing them entirely from the page is a waste because Yahoo's vast array of services is crucial to its identity. As such, these contents were transformed into widgets that the user can use to personalize and tailor the page to their needs. Adding and removing widgets can be done through the widget setup, which is accessed by clicking on the widget button at the bottom-right of the landing screen (figure 6).

The widgets are divided by the services that Yahoo provides. The user can add widgets by clicking the plus button and selecting which side of the screen the widget should be added to. In addition, widgets can be removed by clicking on the minus button and rearranging them vertically through the arrows on each side of the screen (figure 7).

Limitations

Due to time, team size, and Figma constraints, there are limitations to what the prototype can do. For example, the prototype does not display the preview or the effects of each accessibility option. In addition, only weather widgets can be added, and widgets can only perform perfectly when in light mode.

USABILITY STUDY

On November 19, 2023, a focus group was used to conduct usability testing on the finalized prototype created by Yahoo. The 1.5-hour session involved 7 participants leading to a comprehensive analysis of the usability of the overall website while also focusing on the various features including widgets, accessibility setup, and AI search.

The Participants

The participants in the study included 7 individuals with varying demographics and backgrounds. With varying ages (16-55), education (high school degree, bachelor's degree, and master's), and geographic backgrounds. Since the target audience were people who used Yahoo services beforehand, all participants

in the study have previously used Yahoo's services to different extents. Also consent forms were required by all participants in the study for confidentiality of information, and consent (appendix 8).

The Test

The participants were given the link to the project. Each participant was tasked with high-level descriptions of navigating to certain features and achieving the desired functionality. Some of these high-level tasks would be something similar to "customize the homepage with weather widgets." Once the individual portion of the test was conducted, the focus group was structured to strategically dive deep into each feature to provide a deep overview of the issues, or positives of the Yahoo page. For each feature a discussion on the positives and negatives of the usability of the website was supplied. The first feature discussed was the Accessibility set-up that popped up as soon as the page loads, which then brought the AI-search into debate, leading to the big standout feature, the widgets, and finally the overall Yahoo website with the redesign of the article carousel and its new settings menus with new customizable features such as the dark-mode feature. Towards the end of the study, the discussion about usability testing came to an end and more general feedback on the design was also provided. Later a summary of the results was created (appendix 9), and the following feedback has been discussed in tangent with Neilson's Heuristics. These heuristics, even though haven't been included in the discussion, closely match many of the feedback provided and thus the advantages and disadvantages of these features in the prototype will reference the 10 heuristics.

RESULTS

Accessibility Setup

Following the introductions in the focus group, the discussions on the accessibility setup commenced and there was broad agreement about its advantageous effects. This feature has received a lot of praise because of its minimalist, consistency and level of user autonomy. A 40-year-old male user left a particularly moving review, praising its accessibility, particularly for those who need larger text sizes due to visual impairments, saying that "the abundance of accessibility customization can make anyone happy." Despite all these praises, a notable area of improvement was identified, pertaining to the visibility of the system status of the system status similar to the first Heuristic in Neilson's 10 heuristics. A 30-year-old female voiced her criticism on the effects that occur when a button is toggled in the accessibility setup. While her views of the overall

website were very positive, she commented a suggestion towards improving the visibility of the toggled button into a more intuitive design. 'When the button is toggled, instead of just changing the small circle changing the color (figure 8), having the entire button turn purple would provide a better representation of whether a button is toggled or not.'



Figure 8. Toggle button in our design (on the “toggled on” state)

AI-Search

This feature when presented came up with a huge mix of feelings. Some users found the feature to be very intuitive, while others didn't share those feelings. In this sense some users didn't know that this was a feature just by looking at the website as it was a small toggle at the side of the search bar, while the more tech-savvy bunch of the group had found it very easy to locate. Thus, the heuristic H7 came with a heated debate and divide amongst the group. A notable comment that also addressed a different issue came by a 17-year-old male, was misunderstanding between the 'send' and 'go to Yahoo mail'. The user believed both buttons served the same purpose, and if it didn't it was unclear on 'what the go to Yahoo mail' button was doing. This was a clear violation of either 'match between system and real world' (H2) or 'flexibility and efficiency of use' (H7).

However, amongst the confusion one positive that was generally agreed on was the visibility of the system status (H1 where when the AI-search was activated it was clear whether you are interacting with AI or the web. Also, the functionality of the AI was much appreciated and garnered unanimous praise on the design.

Widgets

The widgets were the so-called 'standout feature' of the entire website. This feature came with a shock to the number of participants on how useful and beneficial a feature like that could be. This was also the only feature that came with no debate among the focus-group all unanimously agreeing how intuitive and accessible the design is to work with. With heavy focus on the widgets' user-friendly interface, reversal of action was another talking point of the discussion. The assessment of this widget feature was greatly appraised among the group and none of the participants had any problems with its usability.

Overall Website

To start with the usability of the website, there was unanimity on how usable and easy the website was to follow. The dark mode feature came with lots of praise, even getting appraise for the older users who usually ‘found dark mode to be less visually appealing’. The settings menu was also acclaimed to be very direct and concise without many submenus making it easy to follow through and find what is needed. However, this praise soon turned into a problem that the Yahoosers have failed to recognize. According to Neilson, a website needs to have easy access to help, and documentation as showcased by the Heuristic H10. This feature was completely, forgotten about and was ‘greatly needed’ according to the focus group. To some users, ‘the AI search was very powerful’, however it would have been much more beneficial if there was a section in the homepage that would have explained the usability of the feature to utilize the feature to its fullest. This was a major blow to the team and a feature that will be worked on in the future.

Summary of Results

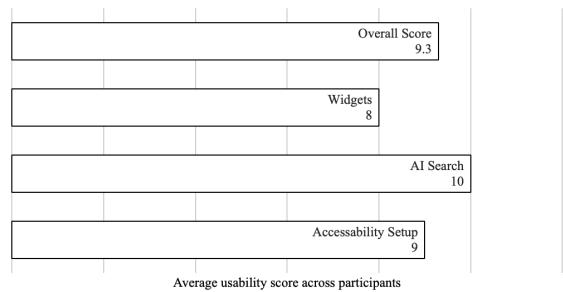


Figure 2. Graph of the results for our usability study

LIMITATIONS

It is important to recognize the limitations of our design and project overall. The key limitations include:

- Lack of documentation or helpful information for users that are confused about a system.
- Toggle buttons are not visually intuitive which makes users confused about the state of the toggle.
- Lack of variety in the widgets.
- Since we were on a time constraint, we only conducted one usability study.
- No further modification of the high-fidelity prototype was made after receiving feedback from our usability study.
- Our prototype flexibility and dynamic interactions.

- The demographic of users involved in interviews and usability studies was narrow.

FUTURE WORK

Significant milestones have been met in reworking the Yahoo home interface, however, there is still space for improvement. Additionally, more potential tasks can be done for subsequent iterations of the project. Future work should improve the current design and fix the project limitations discussed so far. Specifically:

1. Modifying the existing high-fidelity prototype according to the results from the user testing. Due to time constraints, we did not have an opportunity to change our prototype to address the feedback received from our user evaluations. Some things to improve based on the criticism from users include
 - a. making clear toggle indicators for the accessibility menu so users can understand whether they switched the option on.
 - b. reworking the AI chat feature to be more intuitive to use.
 - c. changing the quick action buttons like “send email” on the AI chat to be more distinguishable so users understand the differences between each prompt.
 - d. Adding a help and document section or a link to one for the website to enhance user understanding of the features.
 - e. Creating more widget varieties for users to have a better idea of the full functionality of widgets.
2. More iterative improvements on our design and prototype would be beneficial. This means more user testing should be conducted after modifying the prototype and more improvements on the prototype should be made correspondingly.
3. Include other methods of evaluating the prototype. Instead of only doing focus groups, surveys and individual interviews may also be used to provide alternative ways of gathering user feedback. Heuristic evaluation, walkthroughs, and other types of expert reviews should also be considered to

- provide a different perspective and origin of feedback for the prototypes.
4. Explore other programs or software for designing the prototype. Figma is a powerful tool, but the monetization plans and lack of nuanced interactive prototyping features make it more difficult to design good prototypes for free users. There are likely other tools that can fix these problems and provide a better design experience for interactive prototyping.
 5. Improving the interactions of the prototype to be more flexible and dynamic. For example, there is no interaction in the article menu and none of the options in the accessibility menu change the interface.
 6. Look into researching and improving other pages of the Yahoo website. Our scope only concerns the homepage of Yahoo, but there are plenty of other areas on the website that possibly need a redesign too.

Addressing these limitations and improving upon the design is the next phase to making Yahoo's interface more enjoyable and effective to use.

CONCLUSION

From our research, task analysis, and user requirement data gathering, we identified our target audience and three problems with the current design of Yahoo. Frequent and new users with varying accessibility requirements want better accessibility settings, a customizable experience, and more modern features. Our initial low-fidelity prototype was created to address these issues. Using the feedback from the users that we gathered from our surveys and interviews, we narrowed our prototype design down to three key features. These include the accessibility menu, widget customization, and AI chat system. Our high-fidelity prototype which includes the three features was met with generally positive feedback from usability testing, however, some criticisms should be addressed. Users were confused about the state of the toggle for the accessibility options, and they were also confused about the labels of the quick-prompt buttons for the AI chatbot. Aside from the user criticisms of our prototype, there are also limitations to our project in its entirety. We were unable to modify our prototype

with the feedback we received from our usability testing and we did not conduct additional evaluations of our prototype because of time constraints. Additionally, we were unable to make our prototype as interactive as we liked to, partly because we initially used the free version of Figma which has limited features. Any future undertakings should improve the prototype with the results from the usability testing and address the limitations of this project. Potential reworks of the other pages and sections of Yahoo should also be considered, due to the fact that we focused on exclusively redesigning the homepage.

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APPENDIX

1. Personas

Personas

Persona 1: Matthew, Frequent User



Matthew, 42

Matthew is a 42-year-old man living in Canada who is happily married to his wife and has a 14-year-old child starting high school. He was there when Yahoo was the most popular platform and has been a frequent user ever since. Matthew has no significant health issues and perfect vision, and his motor skills are as good as anybody his age. Finance has always been a passion of his, which is why he went to university to study business and has a bachelor's degree in finance & economics. He has been working at ATZ Financials Group as an investment banking associate for six years. Matthew is enthusiastic about his work but thinks now is the perfect time to start taking the next step in his career.

Image Source: Image by [Freepik](#).

Goals & Objectives:

- Responsible for research and analysis of the financial market.
- Keeping up with the latest trends and news.
- Be promoted to vice president at ATZ Financials Group.

Habits & Behaviors:

- Comfortable with using computers and laptops.
- He has a habit of only using websites he's comfortable with or has used before and doesn't like surprises or changes in familiar website behaviors.
- He spends at least an hour reading the news every day before and after work.
- He often uses search engines to research his work and prefers the ones that return relevant information.
- Prefers using websites with reliable features and are not difficult to use or navigate.

Devices:

- A MacBook for business use.
- An iPhone for business use.
- An Android phone for personal use.

Persona 2: Lisa, Infrequent User



Lisa, 21

Lisa is a 21-year-old female student pursuing a major in humanities at Yale University. She previously lived in New York but moved to Connecticut to attend university and is now living on campus with a friend. Her eyesight is average, and she has fantastic motor abilities from years of playing sports, her favorite pastime. As a requirement for her degree, Lisa must write a senior essay with at least 30 double-spaced pages. The essay requires substantial amounts of research, which is why she wants to start early. A reliable search engine is essential for her, but she has only used Yahoo a few times since learning about it.

Image Source: Image by [lookstudio](#) on [Freepik](#).

Goals & Objectives:

- Researching to obtain reliable information that she can use for her essay.
- Receiving a good grade on her paper and graduating with her degree.
- Have her senior essay be eligible for a prize.

Habits & Behaviors:

- Comfortable with most electronics.
- She is open to using websites that she has never used before if they are safe to use.
- She often uses search engines for schoolwork and research, so she prefers ones that only return relevant results.
- She loves websites that she can customize to suit her needs.
- She likes using websites with easy-to-use interfaces and with the features/tools that she is looking for.

Devices:

- A MacBook for school and personal use.
- An iPad for school and personal use.
- An iPhone for personal use.

Persona 3: Adam, User Requiring Accessibility Considerations



Adam, 25

Adam is a 25-year-old young adult who recently started a new part-time job as a writer at Wording Wonders. Although his motor skills are fine, he has a severe nearsightedness called degenerative myopia, which can create significant vision loss. Because of this, Adam uses a keyboard and the aid of various accessibility settings to use electronic devices and the internet. As a writer and someone passionate about writing, he likes to go on many different sites to gain inspiration and grow his writing skills. He has never used Yahoo before but is considering trying it out to look at the news.

Image Source: [Image by pressfoto on Freepik](#)

Goals & Objectives:

- Become a better writer by taking inspiration from those who are more experienced.
- Transition to a full-time writer.
- Start his own personal blog.

Habits & Behaviors:

- He is only comfortable with electronic devices that he is used to.
- He is open to using websites he has never used if they have helpful accessibility settings to help him navigate them.
- He spends his free time reading articles from various websites.
- He doesn't like websites with complicated interfaces, as it gets in his way when navigating.
- He loves websites with at least some customizability to suit his needs.
- Prefers using websites with helpful features/tools that are easy to use and navigate.

Devices:

- A Windows laptop for business and personal use.
- An iPhone for personal use.

2. Scenario Of A Frequent User

Scenario 1: Frequent User

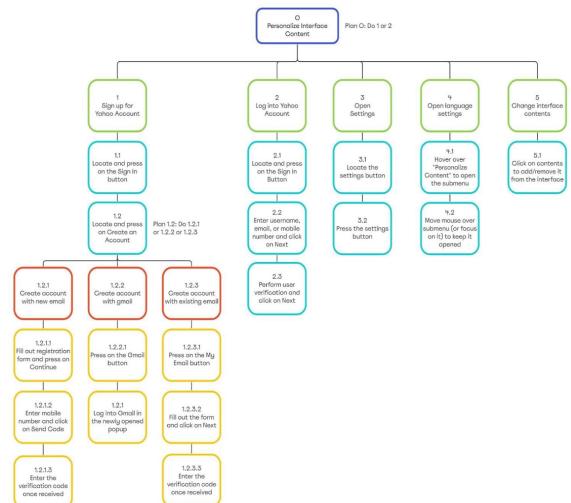
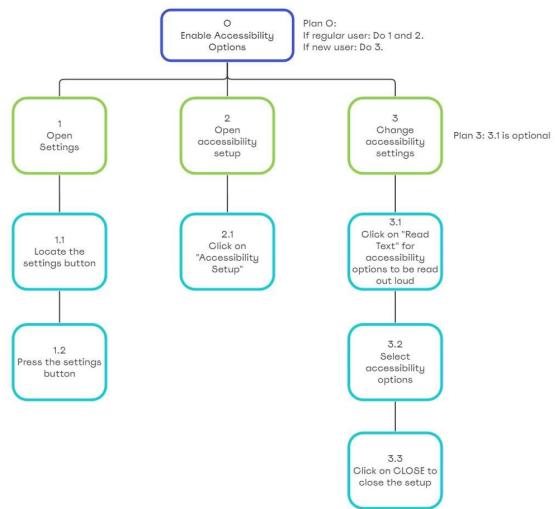
Matthew has been using Yahoo since the late 1990s and early 2000s when Yahoo was at its peak as the most popular platform. He uses Yahoo daily as a search engine and news source, spending at least an hour on it every day before and after work. Before diving deeper into search results and news articles, the Yahoo homepage was his usual starting point.

One evening after dinner, Matthew explored Yahoo's settings to see if any options may improve his experience. He clicked the settings button next to the account profile for the first time and opened the settings dropdown. There, he sees submenus for language, accessibility, theme, text, and personalization settings.

Matthew first decided to experiment with the language settings by setting the language to French but quickly reverted it as he prefers browsing in English. Then, he clicked on the accessibility setup, which opened a popup displaying checkboxes for accessibility options. Although he does not need any accessibility considerations, he still finds it useful when links are highlighted, so he selected that option and closed the popup. Next, he chose to skip the theme setting since he was satisfied with its current looks and tried out different text sizes. Matthew thought the current text size was too small, so he adjusted the slider until he found a size he liked. Lastly, he checked out what personalization options are available, but he is okay with the website as it is, so he didn't change anything.

After modifying the settings, the changes are applied immediately. The links are highlighted, and the texts are now more prominent. The change persists even when Matthew refreshes the page.

3. Sample HTAs



4. Sample Survey Questions

Prototypes

In this section we will show you some of our prototypes for the features that we plan to create. You will be asked to critique them as critically and as genuinely as possible. We are not expecting these prototypes to be flawless. However, note that these prototypes do not represent our final design, so please avoid providing feedback about the aesthetics or visual elements.

The image shown below is a prototype design for our settings menu for Yahoo. Please rate the prototype on a scale of 1 to 5.

1 2 3 4 5

Strongly Dislike Strongly Like

6. Low-Fidelity Sketches

5. Interview Questions

Must ask interviewee if we can record the interview.

Must tell the interviewee that we will delete the recording after using it.

General User Questions

1. What is your age? (Do not have to disclose or provide a specific answer)
2. What is your ethnicity? (Do not have to disclose)
3. What is your level of education?
 - a. If university level, what major are you in?
4. Have you used Yahoo?
 - a. If so, when did you last use it and what did you not like about it?
5. What comes to mind when you think about Yahoo?
 - a. If they answer about UI, follow up with: What feature comes to mind when you think about Yahoo?
6. Did you participate in our survey?

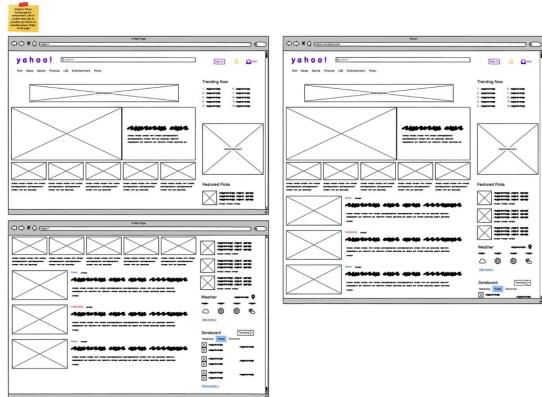
Prototype Questions

Show the prototype of the home page to users. Make sure they understand that the prototype doesn't represent the final product. Don't provide any explanation about the features. Explain to the user that they should not focus on aesthetic properties.

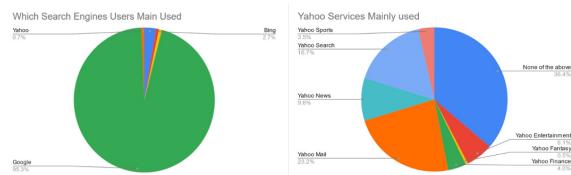
1. What did you notice first when looking at this prototype?
2. What are three things about this prototype that you dislike? (Don't have to answer all three)
3. What are three things about this prototype that you like? (Don't have to answer all three)

Show other prototypes to the users. Explain what the prototypes are supposed to be for.

1. What did you notice first when looking at the accessibility prototype?
 - a. What are three things about this prototype that you dislike? (Don't have to answer all three)
 - b. What are three things about this prototype that you like? (Don't have to answer all three)
2. What did you notice first when looking at the settings prototype?
 - a. What are three things about this prototype that you dislike? (Don't have to answer all three)
 - b. What are three things about this prototype that you like? (Don't have to answer all three)
3. How would you describe our product in less than 10 words?
 - a. Which part of the product made you describe it that way?
4. How does our prototype compare to Google or Bing?
5. Would you recommend a website that resembles our prototype to someone?



7. Survey Results



8. Sample Blank Consent Form

CSCC10H3: Human-Computer Interaction (Fall 2023)

Informed Consent Form:

Usability Study — Informed Consent Form

*Yahoo Redesign Usability Test
Investigators: <Francis Ayyad, Elena Manneh>*

I hereby consent to participate in a usability study conducted by the Investigators (listed above) as part of a Fall 2023 project for CSCC10, Human-Computer Interaction, a course offered by the Department of Computer & Mathematical Sciences at the University of Toronto Scarborough.

I agree to participate in this study and the purpose of this study is <description of the purpose of the study>.

I understand that:

- The procedures to be used are analyzing the redesigned Yahoo page by performing tasks and analyzing its usability.
- The risks incurred by participating are that all insights, feedback, and comments provided during the course of this usability study may be used for research purposes.
- I will receive no compensation for my participation.
- I am free to withdraw at any time during the study without the need to give any explanation or penalty.
- All materials and results will be kept confidential, and that my name and any identifying information will not be associated with the results.
- I can contact the investigators, Francis Ayyad (francis.ayyad@mail.utoronto.ca) or Elena Manneh (elena.manneh@mail.utoronto.ca) with any questions or concerns.

PARTICIPANT

Name (please print) _____

Signature _____

Date: _____

INVESTIGATOR(s)

Name Francis Ayyad, Elena Manneh

Signature Francis Ayyad, Elena Manneh

Date: 18/11/2023

9. Focus group notes

The following document will be a summary of the focus group conducted on November 19, 2023. The focus group greatly discussed many important topics on usability testing based on Neilson's 10 heuristics, and some additional feedback on the design. This 1.5-hour discussion with 6 participants has resulted in an in-depth analysis of the following features: widgets, AI search, accessibility setup, and the other features.

Accessibility Setup:

A feature that came with complete strong consensus on its benefit was met with a lot of surprise on its incorporation on the website. While this feature was met with great praise in its minimalist design (H8), its consistent design (H4) and user freedom (H3). 'The abundance of accessibility customization can make anyone happy', was best summed up by a 40-year-old male who found the design extremely accessible for someone who had eyesight problems, requiring larger text sizes. However, one problem that arose was how the website had a tiny shortcoming in terms of the visibility of system status. "Since it is an accessibility set up shouldn't it have a better toggle design that more clearly shows if a toggle has been activated". What was meant by a 30-year-old female was how the toggle should completely turn purple instead of just a small section of it violating (H1), thus not showing system status for some users.

Average Usability Rating from a scale of 10: 9/10

Additional information: design was loved, and feature was met by surprise due to its 'lack of presence in other websites', as stated by a 28-year-old female.

AI-Search:

A feature that came with a huge mix of feelings. Some users found the feature extremely intuitive, and some didn't. In this sense some users didn't know that this was a feature just by looking at the website as it was a small toggle at the side of the search bar, while the more tech-savvy bunch of the group had found it very easy to locate. Thus, the heuristic H7 came with a heated debate. However, one positive that also came with a consensus among the group was H1, for this feature, once clicked, it was clear whether you are interacting with AI or the web. Finally, one other important piece of feedback provided by a 17-year-old male, was how the 'send' and 'go to Yahoo mail' buttons might cause some misunderstandings, and it took time for him to comprehend the difference.

Average Usability Rating from a scale of 10: 7.5/10 (people with no technical expertise found this feature very complicated bringing the average down. However, the more technical part of the group had an average of 9).

Additional Notes: "A great way to incorporate the Artificial Intelligence to a search bar to utilize Yahoo's services to bring users back to Yahoo's search capabilities" noted a 32-year-old Male.

Design Rating: 9

Widgets:

The standout feature of the application which created shock across many of the participants on how important this feature could be. 5 of the 6 users unanimously agreed that it was extremely accessible satisfying many of the heuristics. However, as one person noted, a female aged 19, the widgets should be able to be customized underneath the search bar. While it was noted that the search bar goes down due to the AI chat feature, the participant insisted that the widget could disappear and reappear when the chat is closed. Easy reversal of action was greatly discussed on this segment, and error prevention of not adding too many widgets was also discussed satisfying H5.

Average Usability Rating from a scale of 10: 10

Additional Notes: "Very unique approach to make Yahoo have its features displayed on the home screen" noted a 32-year-old male, while a 19-year-old female noted that the website "is an empty campus that could be beautifully designed by the user." Thus, implying that H3 was greatly satisfied.

Design Rating: 8.7

Overall Website:

Very accessible provided great visibility of system status on the navigation bar, setting is very straightforward and easy to use. The dark mode was greatly loved, and was even preferred over the light mode, even across the older audience who 'never prefer dark mode'. The article carousel was described as 'a very beautiful way to show the articles. The only advice was that there is no indication that articles are hidden below, and more than an arrow is needed to show that this amazing design is hidden in another section (H6). Finally, one more thing that could be improved is the lack of help

and documentation that are available for the user to retrieve information on the features to help users know how to use them. Apart from that it was greatly loved.

Average Usability Rating from a scale of 10: 9.3

