



MegaBus Redesign Project Report

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1 Introduction

1.1 Purpose

MegaBus(us.megabus.com) is an online website that allows its users to book buses at cheap rates. It is a well designed website with various perks that enhance the user experience. However, upon performing Heuristic Evaluation and Cognitive Walkthrough on the site, a series of flaws and issues were discovered which diminished the usability and user experience of the website. In our project, we address these flaws and issues and improve the website by further adding useful features and removing unnecessary options that the website provides.

A few major issues were discovered while using this website. One of them was the fact that users were not given an option to carry extra baggage. This is a major problem because if most users bring extra baggage, there will be a space constraint in the bus which will be hard to deal with. This is an essential option which has been implemented in most other online bus booking websites. Another major issue we encountered was that the site never asked the user if they are carrying bikes on the journey. This is an existing provision in all buses but does not exist on this website. Since there is a limit to the number of bikes that can be taken in a bus, it is essential for the website to ask users if they want to carry a bike in the journey and not allow users to do so after the limit has been reached.

Our main goal of redesigning this website by creating a prototype is to improve some major aspects where Megabus website lacks. The first and most important improvement is the number of clicks that a user has to make from opening the website till completely booking the ticket. The lesser this number is, the better the website will be. If we can significantly reduce the number of clicks, the user experience will improve as it will save a lot of time for the users. We also look to reduce the number of pages the user has to go through to book the ticket. We do this by collaborating the functioning and design of two consecutive pages into a single page.

We will verify if booking the ticket using our prototype is faster than the Megabus website in two ways. We will check the overall time that a user takes to book a ticket using the Megabus site and compare it with the overall time taken by the same user when using the prototype. Additionally, we will also take a survey and check the satisfaction level of the users when using the Megabus website and compare it with the survey of users using our prototype.

1.2 Tasks Identified

The participants will be asked to completely book a bus ticket with a set of predefined specifications. This means the participants will have to go through the whole process of booking a ticket from start to end, which includes selecting the departure place and date, destination place and date, extra luggage, bike option, seat selection, bus selection and finally the payment section.

1.3 Assumptions

It is assumed that all the users can read english, use and navigate an online website on a computer. Another assumption is that the user has some basic prior knowledge about online transport booking websites.

2 Analysis

2.1 Personas

Persona 1	<i>"The PhD Student"</i>
Fictional Name:	<i>Bill Jones</i>
Job Title/ Major Responsibilities:	<i>University Student</i>
Demographics:	<i>Single, 24 years old</i>
Goals and Tasks:	<i>Bill is a postgraduate student and must travel a lot to attend conferences. He wants to book tickets quickly and attend conferences at a low price.</i>
Environment:	<i>Bill is tech savvy and can navigate a website. He prefers to book tickets using a website/mobile app as he doesn't want to spend time booking through a phone call.</i>
Quote:	<i>"I wish travelling was more affordable by students"</i>

Persona 2	<i>"The Working Woman"</i>
Fictional Name:	<i>Jennifer Brown</i>

Job Title/ Major Responsibilities:	Accountant
Demographics:	Married, 1 kid. 32 years old
Goals and Tasks:	Jennifer must travel regularly from NJ to NY and needs a convenient and affordable way of travelling.
Environment:	Jennifer can navigate a website decently but needs to book tickets on the go. She needs a quick way to book her ticket while commuting from her parking lot to the bus stop.
Quote:	"I just hope that I get a window seat!"

Persona 3	"The Grandfather"
Fictional Name:	Peter Smith
Job Title/ Major Responsibilities:	Retired Cabdriver
Demographics:	Married, 3 kids. 75 years old
Goals and Tasks:	Peter just wants to meet his grandkids in San Hose.
Environment:	Peter struggles to navigate a website and doesn't own a smartphone. He prefers to use the telephone for booking.
Quote:	"I just hope that I can bring along my baggage while travelling! "

Persona 4	"The Youtuber"
Fictional Name:	Chris Williams
Job Title/ Major Responsibilities:	Professional YouTube Content creator
Demographics:	Single, 28 years old
Goals and Tasks:	Chrismust travel quite regularly to attend tech conferences and needs a reliable platform to book bus tickets and travel comfortably.

Environment:	<i>Chris is a tech-savvy guy and prefers to use his MacBook for almost every task.</i>
Quote:	<i>"It's just so convenient!"</i>

2.2 Task Analysis Tools

We used two tools to analyze the website. They were:

- 1) heuristic evaluation
- 2) cognitive walkthrough.

Upon completion of these evaluation methods, we determined certain flaws in the website. We tried to deal with all these flaws keeping in mind the side effects we had to face while designing the prototype. Since the website ignored some of the design guidelines, the heuristic evaluation score was below 90. A brief cognitive walkthrough of the entire site revealed further information about the website's flaws and gave us an insight on how to design our prototype to deal with all these issues.

2.3 Task #1

2.3.1 Task Detail #1

The user will be asked to book a round-trip bus ticket from Los Angeles to San Francisco for 2 Adults and 1 child. The departure date is December 10th and the return date is December 13th. This task will require the user to fill the information on the home page, select roundtrip, type Los Angeles in the "From" textbox, San Francisco in the "To" textbox, select December 10th, 2020 on the "Leaving" date picker, select December 13th, 2020 in the "returning" date picker, choose 2 Adults & 1 child and then click the Find Tickets button. The user will then need to check the timings, the price, and the traveling time of the different buses. If the user chooses to filter, they will be able to filter by price or timings. Once the user has selected the bus for both the departure and the return trip, the user will be directed to a page that shows the seat map of the bus. The user can choose the seats for the trip for all the travelers. After choosing the seats, the user must choose one of the payment options. After providing the payment details, the user can pay for the trip and a confirmation mail will be sent to the mail that was provided.

2.3.2 Task #1 Analysis

This task is both time demanding and hard on the original website, as the current design does not provide the user with the option to choose whether the traveler is an Adult or child. One of the biggest issues is that some users would not want to purchase a seat, but they have to go through the seat selection process for the trips and select the skip option. Another issue is that the search results do not show the number of seats available on the bus. This is a major issue for users booking multiple tickets as they will not know if enough tickets are available unless they go through the process of entering the journey details and selecting the buses. This is an

exhausting task for the user as he/she must visit multiple pages to get to the seat selection page

2.3.3 Task #1 Discussion

The current design is poorly designed as it makes it hard for the user to purchase a ticket. The user has no idea where to add the number of bags or to choose the type of traveler. This issue is fixed by providing an option to choose the type of traveler (either Adult or Child) in the homepage search and the number of bags in a separate page. The prices for adults and children are also shown separately on the trip summary. The seat selection is also made optional as some users prefer not purchasing a seat. Seat selection for both the departure and return trip are shown on the same page, instead of separate pages in order to reduce the number of pages visited by the user. The number of seats left is also displayed if there are low number of seats available. All these changes will reflect in the feedback provided by users thereby increasing user satisfaction and will make booking tickets using this website easier and much faster.

3 Prototype and Design

3.1 Overview of Prototype and Design Features

The link to access the prototype is <https://el2uas.axshare.com/>. This link is also added in appendix 6.8.

The redesigned website makes the process of booking a bus ticket faster and easily understandable. The user has to go through many web pages in the original website for booking a bus ticket. Many of the web pages were unnecessary for some users. Moreover the original website is poorly designed, not very intuitive and takes more time to complete a task. The redesigned prototype reduces the number of web pages that the user has to go through. It also makes many features optional so that some users can skip those. The prototype also has a progress bar, is more aesthetically pleasing and is much easier to understand.

3.1.1 Task #1 Design

In the original design, the users were given no options about the type of traveler. The website also does not provide any option for specifying the number of bikes allowed or wheelchairs. In the redesigned prototype, users can choose the number of adults, children, bikes and wheelchair options on the homepage search itself. This helps the user to find the additional options on the homepage itself, and also helps to decrease the total time to complete the task.

Additionally, in the original design all the users are directed to a number of web pages in order to book a bus ticket. This increases the number of page clicks, confuses users and is heavily time consuming. The redesigned website takes the user to only three web pages and the access to other pages such as seat selection are made optional. These optional features are accessed only by users who want them, while other users can just skip them. This makes it easier for the user to understand the steps of the task and also saves a lot of time for the user.

The original design does not specify to the user, how far the user is in the booking process or which step of the process the user is in. In the redesigned prototype, a progress bar is added. This will help the user to identify at which step of the process they are in and how many more steps are left. This increases the user satisfaction.

Further, the original website provides a summary of the trip only at the end before the payment. This requires the user to keep in memory the price of the ticket that the user chose. In the new design, after the user has chosen the ticket, the trip summary is shown at the top-left side along with the price of the ticket, the additional charges and the total amount to be paid. This does not require the user to remember the price of the ticket as all the details are clearly shown on each web page till the payment page.

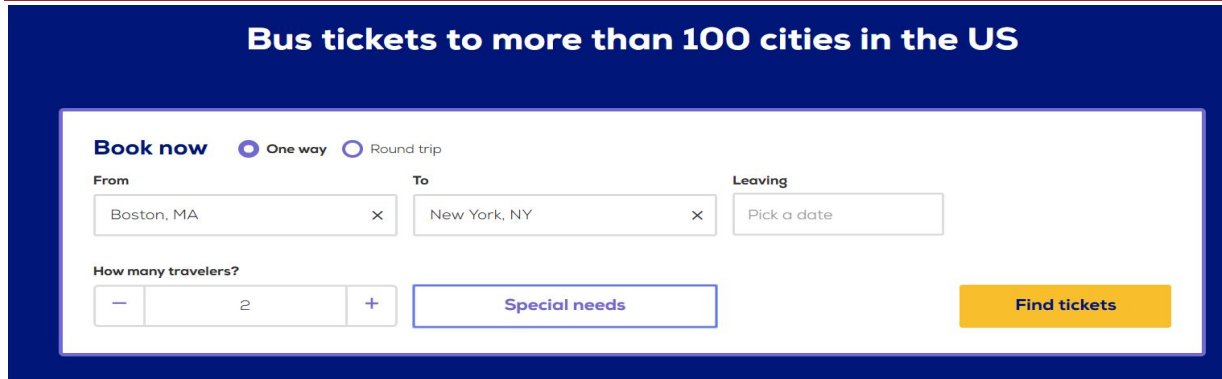
3.1.2 Task #1 Design Justifications

Most of the design changes were done to decrease the time taken to complete the task, decrease the number of clicks needed to complete the task, decrease the number of errors, make the website more user friendly and increase user satisfaction.

3.1.3 Task #1 Prototype

Ticket search bar redesign:

Original Design:



Bus tickets to more than 100 cities in the US

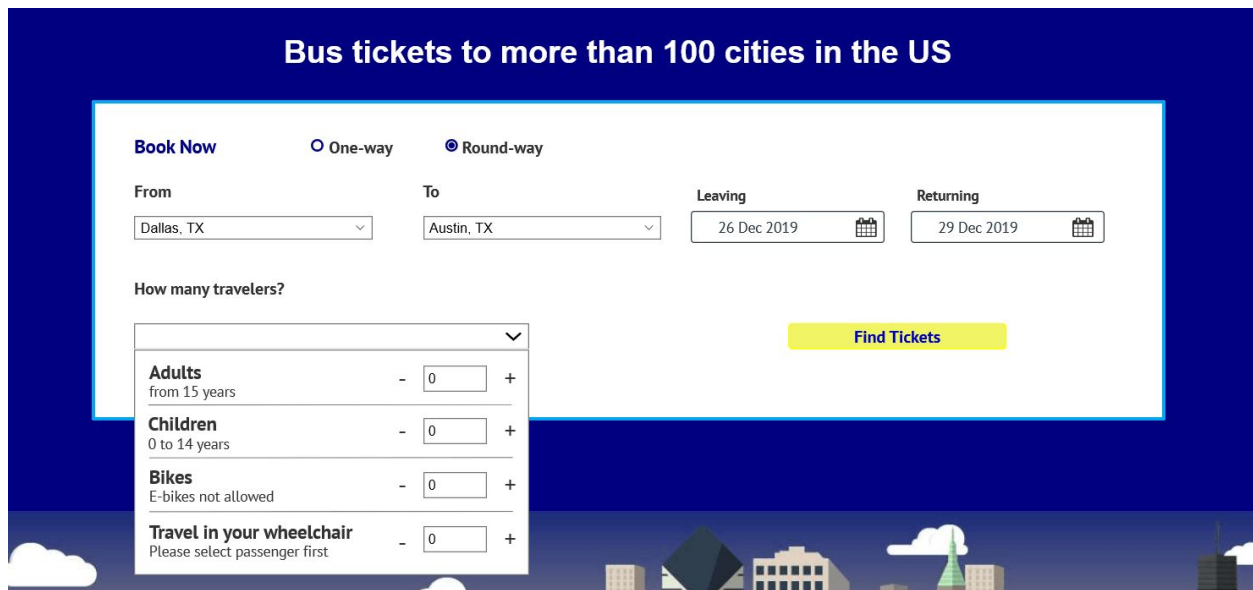
Book now ☒ One way ☐ Round trip

From: To: Leaving:

How many travelers?

(No drop down in the ‘How many travellers?’ option and separate options for including wheelchairs and assistance resulting in redirection)

Redesigned prototype:



Bus tickets to more than 100 cities in the US

Book Now ☐ One-way ☒ Round-way

From: To: Leaving: Returning:

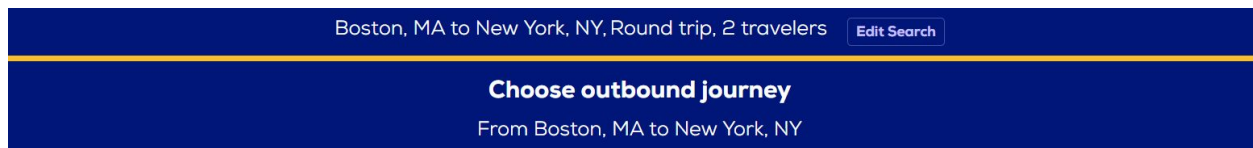
How many travelers?

- +
 - +
 - +
 - +

(Drop down list containing all options under the same field ‘How many travelers?’)

Progress bar redesign:

Original website:



Boston, MA to New York, NY, Round trip, 2 travelers

Choose outbound journey
From Boston, MA to New York, NY

(No progress bar to show the work down by the users)

Redesigned prototype:

Outbound Journey



Choose Outbound Journey
Dallas, TX to Austin, TX, 2 travellers

[Edit Search](#)

Personal Details



Personal Information

Your Order

(Addition of progress bar to show the current page of the users)

Summary and Payment redesign:

Original website:

The image shows a screenshot of a 'Booking summary' page from a website. The page has a dark blue header with the text 'Booking summary'. Below the header, there is a white card containing the following information:

- Ticket 1/2 (with a 'Remove' link)
- Route: Boston, MA to New York, NY
- Departure: Thu Dec 26th 5:00AM
- Arrival: Thu Dec 26th 9:30AM
- Price: \$41.98
- Operator: megabus
- See full route link
- 2 travelers: Boston, MA, South Station - Gate 13 to New York, NY, 7th Ave and 27th St (\$39.98)
- 16 seats: 1 x General seating (\$2.00)
- CHANGE SEATS link

(Summary page showing just the trip details for the users)

Redesigned prototype:

Personal Details

Personal Information

1 Passengers

First Name
John

Last Name
Thomas

First Name
Aravind

Last Name
Raja

2 Extras

Seat Reservation
from \$3.00

Additional Luggage
from \$10.00

Select the No.of.Baggage - 1 + **OK**

3 Contact Information

Email (Required)
abc@gmail.com

Phone number(optional)
480978645

Your Order

26 Dec 2019, 6:00am
Dallas, TX
↓ Austin, TX

2 Adults \$ 29.98
0 Children \$ 0

29 Dec 2019, 6:00am
Austin, TX
↓ Dallas, TX

2 Adults \$ 29.98
0 Children \$ 0.00

Extra Baggage \$ 10.00
Service Fee \$ 2.0

TOTAL (incl Tax) \$ 71.96

Make the Payment

(Summary page asking for personal details from user, trip details, seat reservation, additional baggage and also allows for the user to make the payment all under one page)

3.1.4 Task #1 Prototype Rational

In the redesigned prototype, the ticket searching bar in the homepage contains a new dropdown list under the name 'How many travellers?'. This change was made to specify the type of travellers whether they are adults or children such that they will have respective ticket prices. This drop down list also provides the user with an option to carry wheelchairs or bikes if required. This change allows the user to give additional information about the passengers in the homepage itself. This also reduces the number of redirects and total number of clicks the user has to do inorder to complete the given task.

Inclusion of a progress bar in the prototype provides a much simpler way of the Internal positioning system. It shows the users, their current progress and how far they are in terms of completing the task. This prevents the users from redirecting anywhere on the website and makes them stay focussed towards the completion.

The payment page of the re-designed prototype shows the price of the entire trip selected by the user. It also provides the user to add any extra baggage to the journey and also gives the option to select seats based on different prices. This page also allows the users to give their personal details like name, email and contact number to confirm a booking. All these information are provided in a single page. This provides satisfaction to the users as it makes the booking process much easier. This addition also reduces the internal cognitive load of remembering the ticket prices and date since all the trip details are shown on each web page. Moreover, the average time taken to complete the given task is much more reduced on this specific page when compared to the original website.

4 A/B Testing

4.1 Participants

The participants for this experiment include masters students studying in Arizona State University who were between the age of 22-26. All the participants were recruited by asking my friends for help. We made sure none of the participants felt compelled and gave them sufficient time and information to successfully complete the tasks without any problems.

4.2 Scenarios

The following scenario is the task that the participants will be asked to complete. The instructions given to the participants will be found in section 6.4.

Task :

The user wants to book a bus ticket from New York to Atlanta on February 15th 2020 and simultaneously wants to book the return ticket too on February 20th 2020. The user will be carrying 1 bag and also has a bike. The user wants the bus ticket to cost no more than 200\$. All these specifications are met perfectly by the Megabus website. The user can book a ticket with the exact start and end dates and places and can carry one bag which is free of cost and also a bike if space permits. Furthermore, the ticket will not cost more than 200\$ so it is perfect for this particular user.

A few guidelines are available in section 6.5. These guidelines are to be followed by the researcher when asking the participants to complete the above mentioned task.

4.3 Equipment

The participants will first make use of the original website to complete the task given to them which is completely booking one bus ticket from first page to last page of the website. Once this is done, the same participants will then make use of our prototype to complete the same task of booking the bus ticket. We have made use of one personal computer to record the experiment of all participants as we did not want any discrepancies. We wanted to make sure that the time taken to complete the task using the original website and the prototype did not depend on any external features like type of machine used or the surrounding environment of the participant. This computer was equipped with Microsoft windows 10 Operating System and Google Chrome will be the browser that the participant will use to complete the given task. The computer screen is 15.6 inches and the resolution is 1366x768. Screen capturing software called Loom will be added as a plugin to chrome and be used to record the screen when the participant is performing the task. The participants will also be given an option to utilize a wired mouse. Two different counters will be used to measure two metrics. One of them is the number of errors committed by the participant while using the main site and the prototype. The second metric that will be counted is the number of clicks required by the participant to complete the task.

4.4 Subjective Metrics

A background questionnaire will be given to all participants before the start of the task. The purpose of this questionnaire is to find out the prior knowledge of the participant. After completing the task, a post session questionnaire will also be handed over to the participants and they will be asked to complete this. This is to find out the satisfaction level and to know what the participants think of the original site and the prototype. This will also help as a feedback to know what other changes we have to make to the prototype to make it better and to improve the user experience.

4.5 Quantitative Metrics

The first and most important quantitative metric used in our experiment is the **overall time**. This is the time taken to complete a particular task on a website. In our case, the task refers to the booking of a bus ticket. We will compare the overall time taken by the participants while performing the task in the website and in the prototype and check to see if the time is lesser in the prototype. This significantly improves user experience as users are more likely to use a

website that takes less time for them as time is a major concern for most users booking bus tickets online.

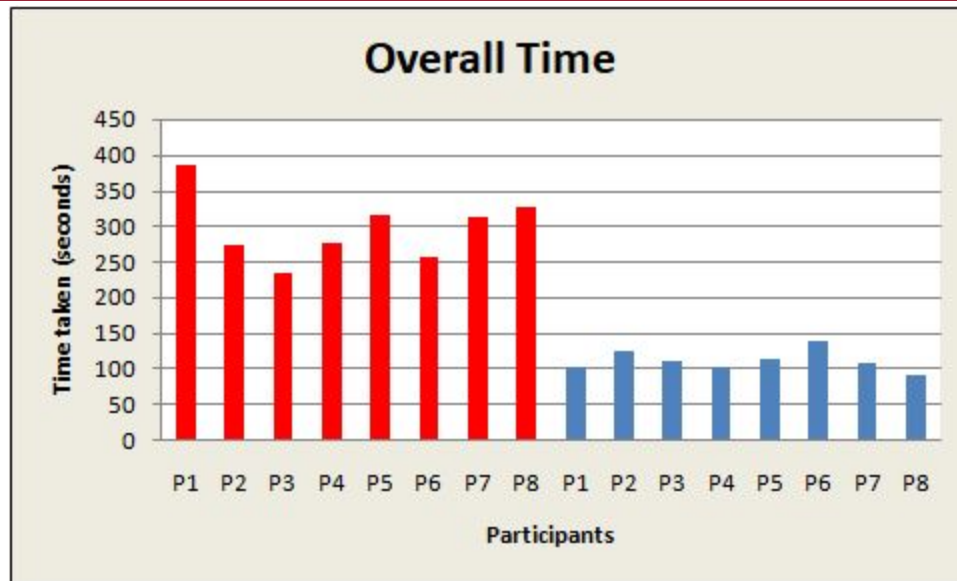
The second quantitative metric that we use is the number of clicks that the participants have to make to complete the task from start to end. We noticed a lot of unnecessary options available on the main website. We have removed them in our prototype and we hope that has reduced the overall number of clicks to successfully complete the task. We will measure this for both the main website and the prototype and run a comparison to check which is lesser.

Our final metric is the number of errors committed by the participants while performing the task. This is a very important metric because a website is not supposed to have many errors. When a website has multiple errors, it will end up frustrating the users and they will switch to another website to do the same task. To ensure this does not happen, we have tried to reduce the errors in our prototype to the best of our capabilities. We will be measuring this to check how well our prototype works in comparison with the main website based on the number of errors that the participants encounter while performing the same task.

4.6 Test results

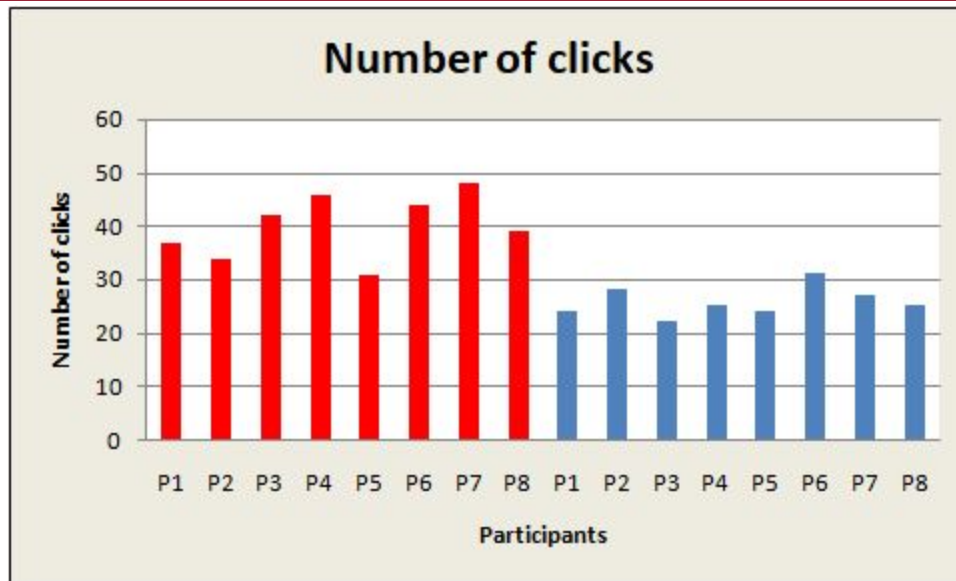
4.6.1 Time to Complete Task Results

The first metric that we used was the overall time taken to complete the task. The results for this metric are shown below in the form of a column graph. The first 8 columns(red) denote the participants using the main website and the next 8 columns(blue) denote the participants using the prototype. Doing a two-tailed unpaired t-test showed that the mean of the overall time taken by the participants to complete the given task using the main website was **297.25** seconds while the mean of the overall time taken by the participants to complete the same task using the prototype was **110.125** seconds. Furthermore, the t-value for the overall time, turned out to be **10.56958** and the p-value was < 0.00001 which is significantly lesser than 0.05. This means that the results are statistically significant which in turn means that we can conclude that the redesign of the website that is, our prototype takes much less overall time to complete the task than the original website. Based on this result, we have shown that the average time taken by the test set of participants using the prototype is drastically lesser than the time taken by the same participants using the main website.



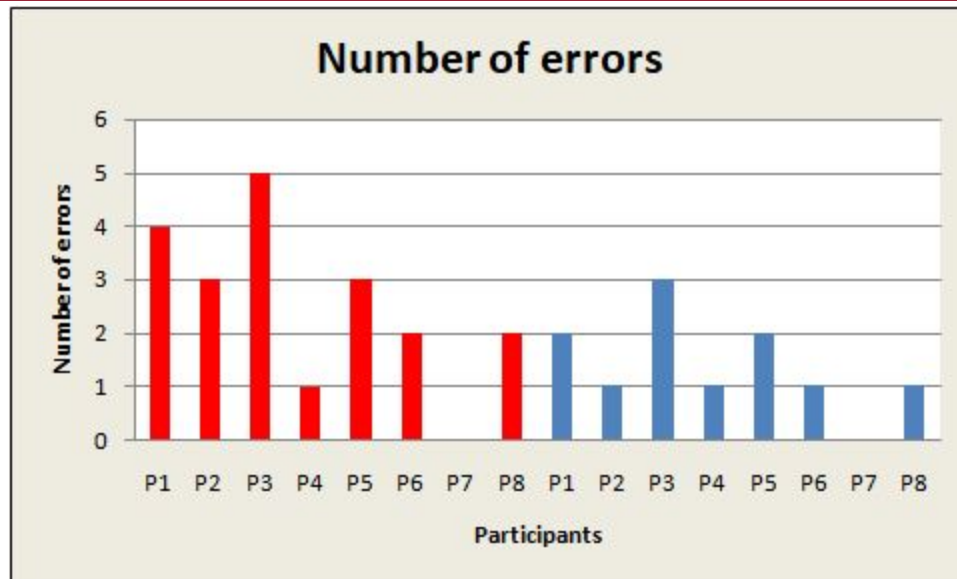
4.6.2 Number of Clicks Results

The second metric that we used was the total number of clicks required by the participants to complete the given task. The result of the comparison between the main website and the prototype for the metric-number of clicks is shown below in the form of a column graph.. The first 8 columns(red) denote the participants using the main website and the next 8 columns(blue) denote the participants using the prototype. Upon performing a two-tailed unpaired t-test, we find the mean number of clicks to complete the task using the prototype was **40.12** clicks while the mean time to complete the task by the same participants using the prototype was **25.75** clicks. Furthermore, the t-value for the total number of clicks was **6.18627**. The p-value was 0.000024. This implied that the result was significant as the p-value was <0.5 . This meant that using the prototype resulted in lesser clicks to complete the task compared to using the main website to complete the same task. Based on the results of this experiment, we can conclude that the participants will prefer using the prototype over the main website since it requires lesser clicks to complete the task.



4.6.3 Number of Errors Results

The final metric that we used was the number of errors committed by the participants while completing the specific task assigned to them. The result of the metric is shown below in the form of a column graph. The first 8 columns (red) denote the errors committed by the participants using the main website while the next 8 columns (blue) denote the errors performed by the participants using the prototype. Upon performing a two-tailed unpaired t-test, we find the mean number of errors committed by the participants while using the website to complete the task was **2.50** while the mean number of errors committed by the participants while using the prototype to complete the same task was **1.38**. Furthermore, the t-value for the total number of errors was 1.72296. The p-value was **0.106901**. The result turned out to be insignificant according to t-test as the p value was not lesser than 0.5. This metric was considered over the fact that it was insignificant according to t-test because the number of errors that the users performed while performing the task was significantly higher in the main website in comparison with the prototype. This is clearly evident when we compare the mean number of errors committed by the test set of participants while performing the task in the main site and while performing the task in the prototype.



5 Conclusions

5.1 Discussion of Results

The primary quantitative metrics which were used in this project are the number of clicks and total time required to complete the task. We noticed an overall improvement in these two metrics when using the prototype compared to the original website. Both metrics had a significant contribution towards the overall throughput of the prototype. The results show that the time metric had the most impact compared to the original website. While our design had an impact on this improvement, it is also possible that the time to book the ticket was lower when using the prototype because there were less results for the user to look through compared to the original site. As far as subjective metrics go, the prototype received better scores in the surveys. However, a larger group of participants would be required to get a conclusive result. Overall, the prototype did improve the website in terms of time to complete a task and ease of use. However, more could have been done to make the experience more enjoyable for the user.

5.2 Lessons Learned

We learnt a lot from this project. One of the important lessons we learned was that users always want to finish the task as quickly as possible rather than understanding each step of the task. In the original website the user had to go through many web pages in order to book a ticket. Most of the users felt this is unnecessary as some of them didn't want to purchase a seat or create a profile in order to pay for the trip. We designed the website so that the user had to go through as few web pages as possible, one for choosing the ticket and the other to enter the details and pay for the trip. Choosing seats, adding extra luggage or creating a profile was all made optional as not all users will require that and this greatly reduced the overall time required to complete the task.

Another lesson we learned was that some features that were considered important from the perspective of the designer, may not be important for all the users. For example, while testing the redesigned website, we found that the progress bar that is shown at the top of each web page was not important for many users but we as designers felt that this would give the information to the users about which step they are in currently.

We also understood the importance of communicating with target users and understanding their needs while building an ecommerce website, and made necessary changes to the redesigned website based on the feedback given by the users who helped in testing the prototype.

5.3 Conclusion

Overall, the prototype did an extremely good job allowing users to purchase a bus ticket in a very short time without any hassle. The users did not have to have used the website before, nor were they expected to know any additional information. This redesigned website will be fast for both novice as well as experienced users. There are some factors which we could have improved, such as further reducing the time taken to complete a task and including a chat option to help users during the booking process. These changes would have further strengthened the website.

6 Appendixes

6.1 Heuristic Evaluation

Please find the Heuristic Evaluation table that is attached to the end of this project report.

6.2 Cognitive Walk-through

Task:

Booking a bus ticket using the Megabus website.

Actions Performed:

- 1) Entering the travel details such as the departure destination and date, the arrival destination and date and number of travelers.
- 2) Clicking on Find tickets.
- 3) Choosing the outbound journey bus and adding to basket.
- 4) Choosing the return journey bus and adding to basket.
- 5) Selecting the seats for the outbound journey.
- 6) Selecting the seats for the return journey.
- 7) Checking the terms and conditions box.
- 8) Clicking the pay button.
- 9) Entering email id.
- 10) Entering personal details like first name, last name, email id and contact number.
- 11) Entering card details and clicking pay by card.

List of actions	Will the user know the next step?	Will the user see the control?	Will the user understand the control?	If the correct action is performed, will the user see that progress is being made toward the solution of the task?

1	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	Yes
3	Yes	No. The button to navigate to the next page by selecting a bus is labeled as 'Add to basket' which does not appear clearly clickable.	No. The button to navigate to the next page by selecting bus is labeled as 'Add to basket' which is not understandable by all users.	No. The selected bus is displayed in small text with bad contrast. The colors used are yellow for background and blue for text which is not clear.
4	Yes	No. The button to navigate to the next page by selecting a bus is labeled as 'Add to basket' which does not appear clearly clickable.	No. The button to navigate to the next page by selecting bus is labeled as 'Add to basket' which is not understandable by all users.	No. The selected bus is displayed in small text with bad contrast. The colors used are yellow for background and white for text which is not clear.
5	Yes	No. Some users will assume it is mandatory to select a reserved seat as the general seating option is small and at the bottom of the page.	No. This page is very unclear as the user will not know what the colored seats represent.	Yes
6	Yes	No. Some users will assume it is mandatory to select a reserved seat as the general seating option is	No. This page is very unclear as the user will not know what the colored seats represent.	Yes

		small and at the bottom of the page.		
7	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes
9	Yes	Yes	Yes	Yes
10	Yes	Yes	Yes	Yes
11	Yes	Yes	Yes	Yes

6.3 New GUI snapshots

Main Page:

The screenshot shows the MegaBus website interface. At the top, there is a navigation bar with links: Explore, Check my bus, Help, Change trip, and Log In/Sign up. A US flag and a shopping cart icon are also present. The main heading reads "Bus tickets to more than 100 cities in the US". Below this is a "Book Now" section with two radio buttons: "One-way" and "Round-way" (selected). The form includes fields for "From" (Los Angeles, CA), "To" (San Francisco, CA), "Leaving" (26 Dec 2019), and "Returning" (29 Dec 2019). A "How many travelers?" section is expanded, showing counts for Adults (0), Children (0), Bikes (0), and Travel in your wheelchair (0). A yellow "Find Tickets" button is located to the right of the traveler selection. The background features a city skyline illustration.

Choosing Outward Journey Page:

Choose Outbound Journey

Los Angeles, CA to San Francisco, CA, 3 travellers

Filter Results

Showing 3 Results

Sort

All transactions will incur a \$2.00 booking fee

6:00am

Los Angeles, CA

8h 20m, 0 transfer(s)

Only 7 seats left!!!

2:20pm

San Francisco, CA

14.99

For 1 traveler(s)

Select Ticket

3:00 pm

Los Angeles, CA

8 hr, 0 transfer(s)

11:00 pm

San Francisco, CA

17.99

For 1 traveler(s)

Select Ticket

9:00 pm

Los Angeles, CA

8h 30m, 0 transfer(s)

Only 3 seats left!!!

5:30 am

San Francisco, CA

19.99

For 1 traveler(s)

Select Ticket

Personal Information Collection Page:

Personal Details

Personal Information

1

Passengers

First Name

John

Last Name

Thomas

First Name

Aravind

Last Name

Raja

2

Extras

Seat Reservation

from \$3.00

→

Additional Luggage

from \$10.00

↓

★ Select the No.of.Baggage

- 1 +

OK

3

Contact Information

Email (Required)

abc@gmail.com

Phone number(optional)

480978645

Your Order

26 Dec 2019, 6:00am

↓

Dallas, TX

Austin, TX

2 Adults \$ 29.98

0 Children \$ 0

29 Dec 2019, 6:00am

↓

Austin, TX

Dallas, TX

2 Adults \$ 29.98

0 Children \$ 0.00

Extra Baggage \$ 10.00

Service Fee \$ 2.0

TOTAL (incl Tax) \$ 71.96

Make the Payment

Seat Reservation Page:

Page 23 of 30

Seat Selection

Outbound Journey

Lower Deck Seats

Upper Deck Seats

Departure Trip

Choose Seat

Seat Categories

- Unavailable
- Reduced Fare
- £3 Load
- £8 Load

Return Journey

Lower Deck Seats

Upper Deck Seats

Return Trip

Choose Seat

Seat Categories

- Unavailable
- Reduced Fare
- £3 Load
- £8 Load

Payment Details Page:

megabus.com

Explore

Check my bus

Help

Change trip

Log In/Sign up

Payment

Payment Details

Credit Card

In order to complete the payment process, please enter your credit card details

Card Number

Expiration

CVC

Card Holder Name

Pay Now

Your Order

26 Dec 2019, 6:00am

Dallas, TX

Austin, TX

2 Adults	\$ 29.98
0 Children	\$ 0

29 Dec 2019, 6:00am

Austin, TX

Dallas, TX

2 Adults	\$ 29.98
0 Children	\$ 0.00

Service Fee \$ 2.0

TOTAL (incl Tax) \$ 61.96

Booking Confirmation Page:

megabus.com


Explore

Check my bus

Help

Change trip

Log In/Sign up



You have successfully booked your trip. A confirmation mail has been sent to the Mail ID provided

Happy Journey !!!

6.4 Instructions for participants

The participants will first be given a basic idea as to what the task is about. This includes a brief description about what they are supposed to do. The task includes the following steps:

- 1) Selecting the from and to locations.
- 2) Selecting the date of travel and the date of return(only in case of a two way ticket).
- 3) Selecting the number of passengers that will be travelling on this trip.
- 4) Selecting appropriate options if the user is travelling with a bike or if the user needs any special needs like external assistance during the journey.
- 5) Selecting the bus according to personal user needs which depend on time of travel,price of travel and duration of travel.
- 6) Selecting the seats according to user needs(window or aisle seat).
- 7) Selecting the mode of payment after entering personal information and making the final payment.

An example of a task given to a participant is shown below:

- Beginning from the home page, book a ticket from New York to Los Angeles from January 2nd 2020 to January 10th 2020 for a single passenger without any additional requirements.
- The budget for the trip is 200\$.
- Window seats are preferred.
- The bus timing must be between 07:00 am and 10:00 pm.
- Use your personal name and personal details in the information page and make payment using a mastercard.

6.5 Researcher guidelines

Before Experiment

Thank you for agreeing to participate in our experiment. The main purpose of our experiment is to examine if the prototype we have created of an already existing website is more efficient than the original website in terms of a few metrics we use to measure the performance of a website. One such metric is the **overall time**. This metric measures the time taken by a user from start to end. In this case, from opening the website to completely booking the bus ticket. There are three parts to this experiment that you will be asked to complete to the best of your knowledge. The first part is a quiz which will test the prior knowledge of participants. This will

help as we, the researchers will know what kind of users we are dealing with, whether the participants are novice users or frequent users. The second part of this experiment is to manually use the prototype. You will be asked to complete a few tasks and the screen in which you are using the prototype will be recorded for further experimentation. In the final part, a survey will be provided to you which you will be asked to complete for me to have a better understanding and idea about the changes and updates I need to make on my prototype in the future.

All the findings and recordings of this experiment will be kept confidential and no access will be given to any third party software.

Please feel free to ask any questions.

Quiz

The primary purpose of the quiz is to find out the extent of prior knowledge the user has on this website. Using this knowledge, we can find out if the site is relatively easier to use for frequent users that have prior knowledge over the novice users that are using the site for the first time. Missing a question because of being unaware of the answer is completely fine but the answers must be honest as that will completely fulfill the purpose of this quiz.

Experiment

The paper provided will be sufficient to write the answers of the particular tasks upon completion. Once a task is completed, if you do not know what to answer, you may leave it blank and move on to the next task. Upon completion of all the tasks, further instructions will be provided to move forward with the experiment.

Post Experiment

Thank you for participating in our experiment and using our prototype. The final step is to complete the post-session survey which will be valuable feedback.

6.6 Background questionnaire

- 1) I have used Megabus before. True or False
- 2) What all tasks can you do through Megabus website?
 - a) Book a bus ticket anywhere in Canada.
 - b) Book a bus ticket anywhere in the U.S.
 - c) Book a bus ticket anywhere in the U.K.
 - d) Book a bus ticket anywhere in China.
 - e) All of the above
 - f) I have not used this website before.
- 3) Megabus website allows two bags to carry along in the journey for all passengers. True or False
- 4) I can book a bus which is scheduled to depart 1 year in the future using this website. True or False
- 5) I travel frequently in buses. True or False
- 6) Megabus gives full refund if a bus ticket is cancelled at the last minute. True or False

6.7 Post-session questionnaire

- 1) I think I will start using this website frequently.
 - a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree

- 2) This website was not easy to use.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 3) This website was difficult to use without the help of a technical assistant.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 4) The website was fast and responsive.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 5) The website lacked help sections and necessary information in certain places.
- a) Strongly disagree
 - b) Disagree

- c) Neither
 - d) Agree
 - e) Strongly Agree
- 6) The website used the same terminology and language in all places without exceptions.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 7) This website is easy to use not only for frequent users but also for novice users.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 8) I did not need any prior information to make full use of this website.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree

- 9) I would recommend this website to my friends using other websites to book bus tickets.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree
- 10) The text and pictures on this website were clearly visible and understandable.
- a) Strongly disagree
 - b) Disagree
 - c) Neither
 - d) Agree
 - e) Strongly Agree

6.8 Link to Prototype

Link to prototype: <https://el2uas.axshare.com/>

6.9 Link to Testing Screen Captures and Survey Responses

Link to Google Drive with Screen Captures and Survey Responses:

https://drive.google.com/drive/u/1/folders/1UIExEO_YlbPCw61f3ji3G8tmeO_aHOuc