

Seattle Symphony Website

Usability Test Report

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Table of Contents

Executive Summary	2
Study Objective	2
Method	3
Results	6
Next steps	19
References	21
Appendix	22

Executive Summary

Purpose: We conducted a usability study on the Seattle Symphony website. The purpose of the study was to determine how easily and successfully users find and purchase concert tickets on the website. Some of the research questions the test was designed to address are

- How successfully and easily do participants find a specified concert ticket?
- What obstacles do users encounter in the process of finding tickets?

Participants: Five people participated in the usability test. Participants were familiar with how to purchase tickets online and had varying degrees of interest in attending the Seattle Symphony.

Results: Participants were given two tasks: to purchase tickets for a specific concert and to purchase a concert of interest. Four of five succeeded in purchasing tickets for the specific concert. All participants were successful in purchasing a ticket for a concert of interest.

Findings and Recommendations: Our test uncovered three primary usability issues:

- **Website Performance:** During our attempt at a pilot study, the website did not load at all. Additionally, one participant received error messages when trying to add tickets to cart, which prevented her from purchasing them. Moreover, two of five participants mentioned that parts of the website loaded very slowly. We recommend conducting a website performance audit to determine what issues are slowing site loading.
- **Pricing and Seat Differences:** Three of five participants thought that how much a given ticket cost was difficult to understand. Four of five thought that iconography in the seating map was confusing. We recommend that seat pricing and seat differences be clarified.
- **Adding Tickets to Cart:** Four of five participants found that their shopping cart held different items than they expected. Additionally, two of five found that they had added unwanted tickets to their cart. We recommend implementing user interface patterns that are more similar to familiar shopping cart experiences.

Study Objective

The purpose of this study was to assess the effectiveness of the Seattle Symphony desktop website (seattlesymphony.org) and to identify participants' obstacles to completing ticket purchases on the site.

The goals for this study were to:

- Determine how successfully and easily participants find and purchase tickets
- Identify the obstacles that participants encounter while looking for and purchasing tickets

In this study, we aimed to answer the following research questions:

- How successfully and easily do participants find and purchase a specified concert ticket?
- What obstacles do users encounter in the process of finding and purchasing tickets?
 - Are participants able to differentiate between seat types?
 - Do participants understand pricing information for symphony events?

Through heuristic evaluation, we identified several potential usability issues on the website. Of those potential issues, we focused on the ticket purchase process because we assumed online ticket sales to be a business priority for the Seattle Symphony.

Method

What happened during the usability test

We conducted the usability evaluation of the Seattle Symphony desktop site in Seattle, Washington on February 15th, 2018.

During the usability evaluation, five participants were asked to spend one hour with the site. During the hour, participants:

- Completed a pre-test background questionnaire
- Performed real-world tasks on the site while thinking aloud
- Completed a post-test questionnaire
- Answered questions in a post-test debriefing interview

Who we tested

Five participants, having the following profile characteristics, evaluated the Seattle Symphony website:

- At least 18 years old
- Live within 50 miles of Seattle
- Interested in attending the Seattle Symphony
- Have purchased tickets online using a desktop or laptop within the past six months
- Use desktop or laptop at least once/week
- In past six months, have purchased tickets on Seattle Symphony website fewer than two times
- Not a user experience or design professional
- Have not worked for Seattle Symphony or Benaroya Hall

*Four of the five participants were at least somewhat interested in attending a performance at the Seattle Symphony.

Participants, matching the user profile above, were recruited prior to testing and subsequently completed an online screening questionnaire (See Appendix A). Participants were compensated for their time with chocolate, nut bars, and baked goods.

What participants did

During the usability test, participants were asked to complete a task on the site for each of two scenarios. A counterbalanced design was used for the tasks to control for order effects (See Appendix E). If participants used the search function on the website, they were asked to find another way to complete the task.

We created the tasks and scenarios based on the potential usability issues we identified through heuristic evaluation. The tasks and scenarios were devised to be aligned with our assumptions about the Seattle Symphony’s primary business objectives. (See Appendix C for final tasks and scenarios.)

What data we collected

The following preference and performance data were collected during the study.

Data	Type	How data were collected
Expression of frustration/confusion	Qualitative; subjective	Think Aloud Protocol
Completion of finding specified concert	Quantitative; objective	Observation
Understanding of filter feature	Qualitative; subjective	Think Aloud Protocol
Completion of finding showtimes of concert	Quantitative; objective	Observation
Completion of finding a ticket for the Sibelius concert showing on Sat.	Quantitative; objective; ordinal	Observation; levels of success
Understanding of date selection/buy tickets widget	Qualitative; subjective	Think Aloud Protocol
Completion of finding two seats with unobstructed views under \$70	Quantitative; objective	Observation
Understanding of the iconography used to represent the different pricing	Qualitative; subjective	Think Aloud Protocol

levels of the seats		
Understanding of the iconography used to represent the type of views (unobstructed/obstructed) of the seat	Qualitative; subjective	Think Aloud Protocol
Understanding of adding tickets to cart	Qualitative; subjective	Observation and Think Aloud Protocol
Completion of purchasing tickets	Quantitative; objective	Observation
Participant finds option to checkout as guest without creating an account	Quantitative; objective	Observation
Participation rating of ease of use	Quantitative; subjective	Likert
Suggestions for improvement	Qualitative; subjective	Think Aloud Protocol
Perception of usability	Quantitative; subjective	Jeff Sauro's SUPR-Q Questionnaire

In our study plan, we included the additional tasks below:

All	# and types of assists to complete task	Both; objective	Observation
5	Completion of purchasing a parking at Benaroya Hall	Quantitative; objective	Observation

We ultimately decided not to count the number and type of assists to complete the task because doing so would impede the collection of other data that we thought would be more critical for answering our research questions. We also decided not to include purchasing parking as a task because parking sales did not seem like a primary business goal for the Seattle Symphony.

Testing location and logistics

The usability test was conducted in a study room on the University of Washington campus. The test was administered on a laptop and participants had the option to use either the trackpad or a provided mouse.

The following is a summary of the participants' computing environment:

URL of tested website:	http://www.seattlesymphony.org/
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Computer:	MacBook Pro (13-inch, 2017)
Browser tested:	Chrome version 64
Screen resolution:	1440 x 900
Operating system:	macOS High Sierra (version 10.13.3)
Connection:	University of Washington Wi-Fi

A laptop camera and Silverback 3 were used to obtain visual and audio recordings of participants and their screens.

The team conducting the test consisted of a moderator, who sat next to the participant, and three notetakers. Google Hangouts was used to share participants' screens with notetakers.

Introductory Questions & Tasks

At the beginning of each session, we asked participants questions, including:

1. How many concerts have you attended at the Seattle Symphony in the past year? (*If participants answered "None," we skipped to Question #6.*)
2. How do you buy your tickets to the symphony?
 - a. Do you do it yourself or does someone else make the arrangements?
 - b. How did you book your last ticket?
3. Do you have a subscription to Seattle Symphony concerts?
4. Do you donate to the Seattle Symphony?
5. Tell me about the last time you bought tickets to the symphony online.
6. Tell me about the last time you bought tickets online.

Results

What Worked

Several items worked well for participants. During the post-test debriefing interview, we asked participants "*What was the best thing about buying tickets?*" In response, participants reported liking the following:

- Venue and Seating Diagrams as a visual means to selecting seats (P1, P2, P3)

- *“I liked the seating chart the very best. I thought that the hover was useful. . . . It was nice to be able to see the whole sections. It was nice to be able to see the individual seats”* (P2)
- *“[The seating map was] relatively responsive. . . . I could click on which seats I liked easily.”* (P3)
- Visual design of website (P2, P4)
 - *“The website didn’t have too many extra features.”* (P2)
 - *“I liked the website in general . . . It has nice pictures.”* (P4)
- Date-based browsing of events using the calendar widget (P4, P5)
 - *“I like how I can . . . browse by date.”* (P4)
 - *“I really liked that they allow you to look for concerts based on . . . a date that you’re available.”* (P5)

Without prompting, participants also mentioned things that they liked the following as they worked through the tasks:

- Pricing information displayed when hovering over seat icons (P1, P4)
- Clickable “mini” map of venue to quickly change sections while viewing seating diagram was found to be easy and useful (P3, P4)
- Concert detail page provides clear information about show dates (P4)

Issues Identified

Task completion

Task: Purchase tickets for a specific concert

- Three participants (P3, P4, P5) were successful in finding the concert. Two (P1, P2) were only partially successful; P1 did not know that he/she had to find seats with unobstructed views and P2 chose the wrong day for the correct concert (Thursday instead of Saturday).
- Four participants (P1, P2, P3, P5) successfully purchased tickets for the concert described in the scenario. One (P4) was unable to do so because she was presented with an error message when she tried to add the tickets to her cart.

Task: Purchase tickets for a concert of interest within a specified duration

- Only one participant (P5) was successful. The other four (P1, P2, P3, P4) were partially successful; they could not verify that the concert was within the specified duration because the concert duration was not on the webpage for the concert they had chosen.
- All five participants were completely successful in purchasing tickets to a concert of interest.

Issue Severity

We ranked the severity of the issues uncovered during the study. Our severity rankings were derived from Jeff Sauro's 3-point severity scale (Sauro, 2013):

- **Minor:** Causes some hesitation or slight irritation.
- **Moderate:** Causes occasional task failure for some users; causes delays and moderate irritation.
- **Critical:** Leads to task failure. Causes user extreme irritation.

Website Performance: Pages of the website did not load or did so very slowly

Critical Severity

Evidence:

- Site was not in service during the time scheduled for the pilot session
- Two of five participants mentioned that parts of the website loaded very slowly (P4, P5)
- "This website is slow, I don't know why." (P5)
- For P3, the page greyed out when loading, but the loading bar was hidden.
- P4 received website error messages when trying to add tickets to cart, preventing checkout. She noted, "*I would probably just be frustrated and be, like, 'Ahh... forget this' — honestly. Because the website's not working.*"

Recommendations:

- Perform a website performance audit to determine what issues are currently affecting load time of the site.
- Use web analytics to track when and why users are experiencing errors.

Search: Internal site search doesn't yield relevant results

Moderate Severity

The screenshot shows the Seattle Symphony website's search results page. At the top, the navigation bar includes the Seattle Symphony logo, a menu icon, and links for Tickets, Donate, and My Account. On the right, there are icons for search, Benaroya Hall, and a right arrow. Below the navigation bar, there are radio buttons for 'Seattle Symphony' (selected) and 'Benaroya Hall'. A search bar contains the text 'sibelius' and a search icon. Below the search bar, it says 'Results 1-10 of 18'. On the left side, there is a 'Filter your results' section with three checkboxes: 'Performers', 'Pages', and 'Events'. The main content area displays three search results, each with a name in bold and a short description:

- Leif Ove Andsnes**
The New York Times has called Leif Ove Andsnes “a pianist of magisterial elegance, power, and insight.” With his commanding technique and searching interpretations, the celebrated Norwegian pianist...
- Joshua Bell**
With a career spanning more than 30 years as a soloist, chamber musician, recording artist and conductor, Joshua Bell is one of the most celebrated violinists of his era. An exclusive Sony Classical...
- Stephen Bryant**
Stephen Bryant is a violinist known for his passion and enthusiasm for music. Before joining the Seattle Symphony in 2002, he served as Principal Second Violin of the Sydney Symphony, the Malaysian...
- Olari Elts**
Olari Eltss passion for distinctive programming rich with invention has earned him much praise on the international music scene. His symphonic programs often feature choral repertoire regularly...

Figure 1: Search results page

Evidence:

- When tasked with finding the specific concert, two participants (P1, P2) attempted to use internal site search, but they both struggled to find relevant content.
- For both participants, typing in the composer name “Sibelius” did not yield the correct concert in the first page of the search results. P1 did not find the Sibelius concert using the search bar. P2 initially didn't find the Sibelius concert even when she filtered the results by “Performers”, but did find the concert after filtering the results by “Events”.
- P2 expressed confusion over the meaning and functionality of search filters.
 - “You get this whole list and it's confusing... there's a lot of pages.” (P2)

Recommendations:

- Display search results that match what users type into the search field

- Adjust current search indexing to place more weight on events in order to improve their placement in unfiltered search results
- Reword search filters for more clarity and move or re-style to provide more visual indication as to their utility

Concert Detail Page: Some concert detail pages lack important information

Moderate Severity

The screenshot shows the Seattle Symphony website's concert detail page for Jake Shimabukuro. The header includes the Seattle Symphony logo, a menu icon, and navigation links for Tickets, Donate, and My Account. A search bar and a link to Benaroya Hall are also present. Below the header is a navigation bar with links for Concerts and Tickets, Calendar, Subscriptions, Group Sales, Special Offers, Ticket Office, and Seating Charts. The main content area features a large photo of Jake Shimabukuro wearing sunglasses. To the right of the photo, it says 'Live at Benaroya Hall >' and 'Dates and Tickets'. A specific concert is listed for 19 Feb (Mon) 2018 7:30PM with a plus icon. A prominent 'BUY TICKETS' button with a right arrow is displayed. Below this, the location is listed as 'S. Mark Taper Foundation Auditorium - Benaroya Hall'. At the bottom of the page, there is a paragraph of text describing Jake Shimabukuro's work with the ukulele.

SEATTLE SYMPHONY MENU TICKETS | DONATE | MY ACCOUNT SEARCH BENAROYA HALL →

Concerts and Tickets

Calendar Subscriptions Group Sales Special Offers Ticket Office Seating Charts

Jake Shimabukuro

Live at Benaroya Hall >

Dates and Tickets

19 Feb (Mon) 2018 7:30PM +

BUY TICKETS →

LOCATION
S. Mark Taper Foundation Auditorium - Benaroya Hall

Jake Shimabukuro has elevated the ukulele from a beloved Hawaiian folk instrument to a world-class vehicle, fearlessly traversing boundaries and putting his inspired touch on everything from Queen's "Bohemian Rhapsody" to Schubert's "Ave Maria." And he can still vividly remember the first time he held a ukulele, at age four. "I fell in love with the ukulele

Figure 2: Concert detail page

Evidence:

- In Scenario B, 3 out of 5 participants (P1, P2, P4) failed to find the duration of a concert they were interested in. P2 and P4 failed because the website simply did not list the duration in the concert details page for the concerts they chose.
- "Aha! There's a tiny thing that says description, but it still doesn't tell me when it ends or how long." (P2)
- P2 expected to find more information on show details (e.g., when doors open, intermission, end, opening acts) when they clicked on "View Ticket Details"

- *“Uh, it doesn’t tell me how long it lasts. When I click on ‘Read More’, I would expect to find the duration. At this point, I would either give up or call them...”*
(P4)

Recommendation:

- Include concert duration in all concert detail pages

Concert Detail Page: Some audio music samples are not available for some concerts

Moderate Severity

Evidence:

- In Scenario B, three of five users (P3, P4) wanted to listen to sample clips of the music when deciding on which concert event they were interested in attending, but weren’t able to find any on the concert details page.
- P3 left the Seattle Symphony site and searched Google for sample music by Carmina Burana.
- P4 chose a Lisa Fischer concert that did not have preview clips.

Recommendation:

- Include preview clips for all musical events listed in the website so that users won’t have to leave the site to find them.

Venue Section and Seating Diagrams: Lack information about seat view and section names

Moderate Severity

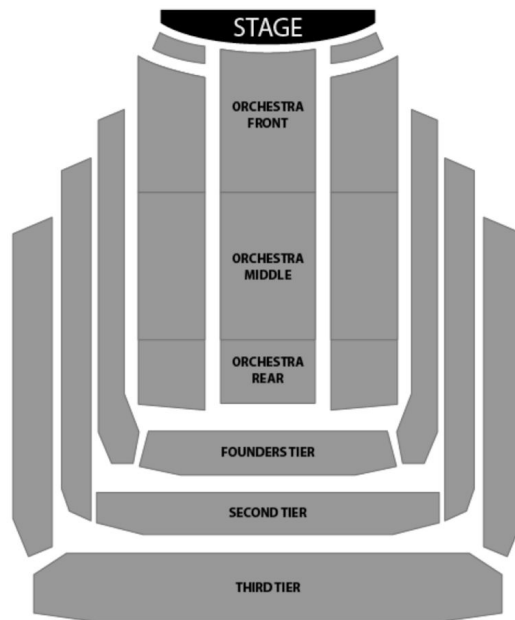


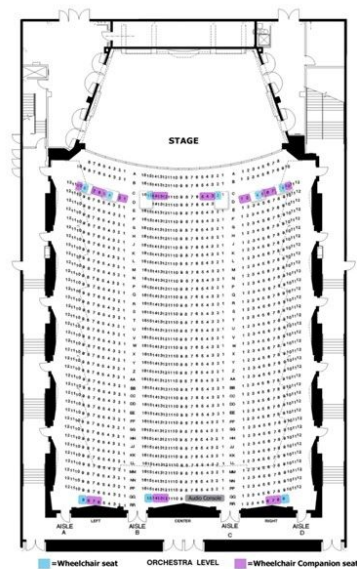
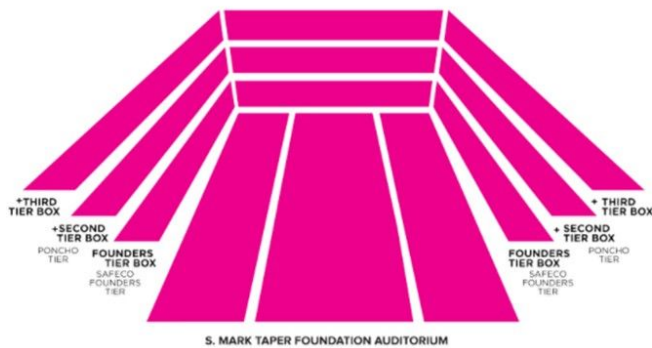
Figure 3: Venue Section Diagram

Evidence:

- 4 out of 5 participants expressed confusion over the meaning of the different seating sections. (P1, P2, P4, P5)
 - P1 did not know the difference between Orchestra and Tiers sections.
 - “*Second tier box, I don’t know what that means... maybe more privacy?*” (P4)
 - “*I don’t know what Orchestra A, B, C means.*” (P4)
 - “*I don’t know what any of these [seating sections] mean.*” (P5)
- 3 out of 5 participants (P3, P4, P5) left the Seattle Symphony site to search for more information on seating. P3 used TripAdvisor and Yelp to read venue reviews and look for seating recommendations. P5 searched Google images (“*Benaroya Hall seating chart*”) and found those results to be more helpful than the seating map.

Recommendations:

- Most participants wanted to see an image of the view from the selected seat or seating section.
 - “It would be cool to see a picture of the view from the seat, Google Maps style, to show the view inside the theater.” (P3)
 - “It would be nice to have a picture of what it would look like from your seats.” (P4)
 - “Seeing actual photos [of seats] would help.” (P5)
- While users are in the process of selecting a seat, consider including a link titled “View Detailed Seating Map”. When users click this link, it will open a new tab and take users to the Seating Chart portion of the site, where there are detailed graphics (like the ones below) to help users better understand the layout of the different sections/tiers and seats. The diagrams are currently available on the Seattle Symphony website, but are not accessible during the seat selection process:



Figures 4 and 5: Dimensional venue map (left), Orchestra level detailed seating chart (right).

Venue Section and Seating Diagrams: Participants struggled to understand the seating diagram iconography

Moderate Severity

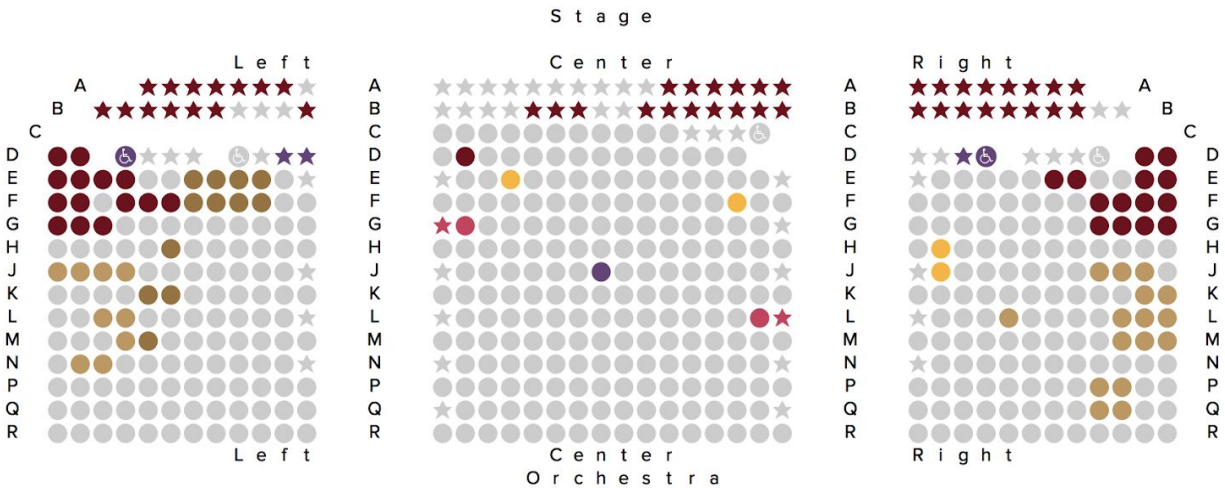


Image: Seating diagram

Evidence:

- 4 out of 5 participants were unclear of the meaning of the iconography in the seating diagram (P1, P2, P4, P5)
- P1 thought that the stars indicated “special” spots.
- P2 saw the key at the top of the page for the seating icons, but expressed confusion, thinking the colors referred to the orchestra sections.
- P4 didn’t expect that clicking on seat icons would automatically add them to their cart since there was a separate “Add to Cart” button.
- *“What does the star mean? All the seats in the front look the same to me so I don’t know what the stars mean. I wonder what the purple means. It’s kind of confusing. Purple’s more expensive. The stars are the cheapest. I think at this point, I would forget about what they mean.”* (P5)

Recommendations:

- Consider reducing the number of icon variants (i.e. shape, color) to simplify and focus the chart’s primary purpose of conveying pricing information. View, promotions, and any other supplemental information could then be moved to the hover tooltip and/or a separate seat preview area.
- Clarify pricing information and provide supplemental information about different pricing tiers
- Add each icon to the seating map legend.

- Substitute the star icon for another shape that is less likely to confuse users into thinking these seats are “special”.

Venue Section and Seating Diagrams: Pricing of seats was difficult to understand

Moderate Severity

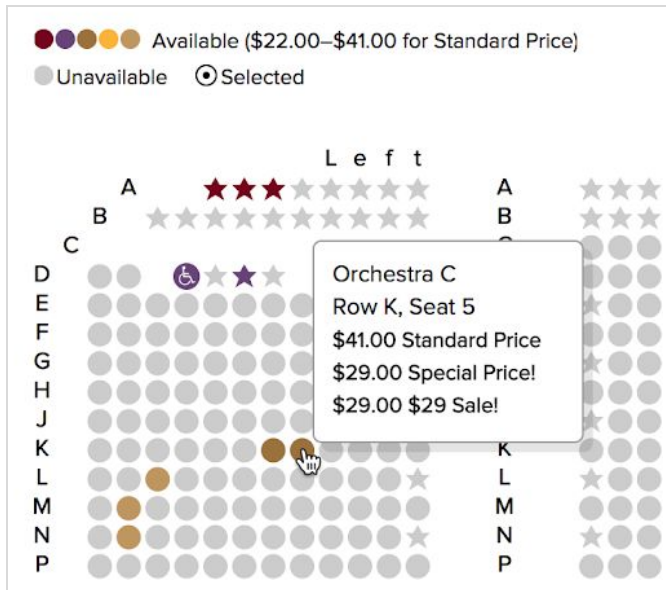


Figure 6: Close-up of Seating Chart pricing legend with icon hover tooltip

Evidence:

- Three of five participants (P3, P4, P5) found the seat pricing hard to comprehend.
- “Why would it have the standard price by the discount? It’s a bit strange.” (P4)
- “The further back it is, the more expensive it is. I would assume that closer to the stage would be more expensive . . . there must be a reason why it’s cheaper.” (P5)
- “\$65 standard, \$35 special . . . why is it ‘special’?” (P5)

Recommendations:

- Explain the difference between the Special and Standard price. Or to avoid confusing users, cross out the standard price and list the special price instead of listing both in the same fashion.

Shopping Cart: It is not clear when tickets are added to shopping cart

Moderate Severity

Purchase Best Available Seating (1 Seats selected) Subtotal: \$37.00

[View Ticket Details](#)

SECTION	ROW	SEAT	PRICE TYPE	PRICE	DELETE
Orchestra Left	K	7	Standard Price	\$37.00	DELETE

[Add to Cart](#)

Figure 7: Seating selection diagram

Issue Description:

Participants instinctually clicked on seat icons to find more information about a particular seat. After clicking on a seat icon, a message read “*This seat has been added to your cart.*” However, users still had to click the “Add to Cart” button in order for tickets to actually be added to cart

Evidence:

- 4 of 5 participants expressed confusion or surprise when first viewing their shopping cart, expecting it to contain a different combination of tickets than actually present (P2, P3, P4, P5).
- 2 of 5 participants inadvertently added unwanted tickets to the ticket queue while interacting with the seating diagram. (P2, P4)

- P2 expected to find more information on show details (i.e., when doors open, intermission, end, opening acts) when they clicked on “View Ticket Details”
- P2: *"[The ticket is] already in the cart, so if I click 'Add to Cart'... I already added it to the cart. So let's see if I do it again, what happens... Maybe I selected a seat? I'm not sure if it's actually in the cart yet."*
- P3: *"I'm glad I noticed the 'Add to Cart' because initially I thought I had already put them in the cart, but I guess that's not how it works."*
- P4: *"So it looks like I committed to those four seats, but I didn't know that I did that ... So by clicking on the dots, that's putting it in the cart automatically. I wouldn't expect that."*
- P4: *"When I clicked on these dots, it said they have been added to my cart. So I would expect this button to say something like 'View Cart' instead."*

Recommendations:

Implement familiar UI patterns that align more closely to common shopping cart experiences:

- Add a cart icon to the top of the page to provide a clear, real-time indicator cart status. Optionally add a preview of cart contents on cart icon hover or click. The cart icon is a common website UI pattern that should help to alleviate some user confusion.
- Remove “View Ticket Details” button and its associated collapsible table (currently acting as a cart “queue”), which led to confusion for some participants.
- Add a seat preview (either within the existing tooltip or a dedicated area on page) that displays when a seat icon is clicked. Provide a prominent “Add to Cart” button and detailed seat information in this preview.
- Rename button at the bottom of the page from “Add to Cart” to “Proceed to Checkout”.

Issues identified post study

At the end of each session, participants were asked “What was the worst thing about buying tickets?” Here is a summary of participants’ responses:

P1	Seating map was confusing.
P2	<p>Website did not have enough information.</p> <p><i>“There is more information that would have been useful to have . . . It'd be nice to not have that option to see a show that doesn't have any tickets left.”</i></p> <p>Slow process of finding and purchasing tickets.</p>

	<i>"I think it was really slow. It was a long process to get from here is what the show is to the very end"</i>
P3	No way to tell if the seats you picked were good if you haven't been to the theater before.
P4	Hard to tell what view is like from seat. <i>"Not being able to see what the view is like from your seats. I would like that, especially as a first time visitor."</i> Checkout was odd. <i>"The checkout was a little odd...not as user friendly from the moment you click on the map to best available seat. Would be nice to have a graphic when you hover."</i> Concert details page didn't have music samples.
P5	Could not find special price. <i>"I'm frustrated that I can't find a special price since it seems like you can save."</i>

Overall Ratings

We also administered the SUPR-Q, developed by Jeff Sauro to assess the quality a website's user experience (Sauro, 2015). SUPR-Q stands for Standardized User Experience Percentile Rank-Questionnaire. However, the significant cost of accessing Jeff Sauro's SUPR-Q database prevented us from obtaining a meaningful comparison between our SUPR-Q total score and industry benchmarks.

Question	P1	P2	P3	P4	P5	Avg
It is easy to navigate within the Seattle Symphony website.	4	3	4	3	5	3.8
The Seattle Symphony website is easy to use.	4	3	4	3	5	3.8
I feel comfortable purchasing from the Seattle Symphony.	4	5	5	3	5	4.4
The information on the Seattle Symphony website is trustworthy.	4	5	5	4	4	4.4
I find the Seattle Symphony website to be attractive.	4	4	5	4	5	4.4
The Seattle Symphony website has a clean and simple presentation.	4	5	5	4	5	4.6
I will likely return to the Seattle Symphony website in the future.	3	4	5	3	4	3.8

Net Promoter Score: **-40**

Question	P1	P2	P3	P4	P5	Avg
How likely are you to recommend this website to a friend or colleague?	5	5	10	6	7	6.6

Understanding Net Promoter Score:

The Net Promoter Score (NPS) measures customer experience and claims to predict business growth. The NPS is calculated using the single question, “How likely are you to recommend this website to a friend or colleague?”. Scoring is on a scale of 0 to 10, and respondents are grouped into the categories of Promoters, Passives or Detractors, depending on the score they give;

- Promoters give a score of 9 or 10 - they are consistent customers who are likely to increase their purchases over time and account for more than 80 percent of referrals in most businesses.
- Passives give a score of 7 or 8 - they are called ‘Passives’ because their repurchase and referral rates are as much as 50 percent lower than Promoters.
- Detractors give a score of 0 to 6 - the Detractor group is made up of the unhappy customers, they account for more than 80 percent of the negative word of mouth and have high rates of churn and defection.

The NPS is calculated by taking the percentage of promoters minus the percentage of detractors. The NPS Score can range from a low of -100 (if every customer is a Detractor) to a high of 100 (if every customer is a Promoter).

“Given the NPS range of -100 to +100, a ‘positive’ score or NPS above 0 is considered ‘good’, +50 is ‘Excellent,’ and above 70 is considered ‘world class.’ Based on global NPS standards, any score above 0 would be considered ‘good.’ This simply means that the majority of your customer base is more loyal.”

— Jamie Yan, QuestionPro.com

Next steps

We recommend that the Seattle Symphony make changes to their website to address the issues in this order, based on severity:

- Website Performance

- Perform a website performance audit to determine what issues are currently affecting site load time
- Internal Site Search
 - Make sure that the top results from the search have words that match with what the user types into the search bar
- Seating Diagram
 - Clarify pricing and provide supplemental information about different pricing tiers
 - Simplify iconography to reduce the number of icon variants (e.g. color, shape)
- Adding to Cart
 - Use familiar shopping cart design elements and interactions:
 - Include a cart icon at the top right to allow a quick preview of its contents
 - Display a detailed seat preview that includes “Add To Cart” button
 - Clarify checkout process by using a “Proceed to Checkout” button
- Venue Diagram
 - While users are in the process of selecting a seat, include an option to “View Detailed Seating Map”, which opens a new tab and takes users to the Seating Chart section of the website.
 - Most users wanted to see an image of the view from the selected seat or seating section. (P2, P3, P4, P5)

After making changes, we recommend the Seattle Symphony additional usability tests on five to eight users to see if the changes lower the number of usability issues that users encounter and improve the overall effectiveness of the website. The results of the second usability test could be used to inform the next iteration of the website.

This usability study was limited to the finding and purchasing of tickets. We recommend that future usability studies evaluate issues that users encounter while trying to make donations to the Symphony online or while signing up for a subscription to the Symphony.

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Appendix

Appendix A: Screening Questionnaire	25
Appendix B: Consent Form	27
Appendix C: Final scenarios & tasks	29
Appendix D: Facilitator Script and Note-taking Sheet	30
Appendix E: Counterbalancing Order of Scenarios	33
Appendix F: Note-taker's Sheets	34
Appendix G: Post-Study Questionnaire (Jeff Sauro's SUPR-Q)	36
Appendix H: Coded Results	37
Appendix I: Participant Profiles (from Screening Questionnaire)	38
Appendix J: Participant Interest in Seattle Symphony (Pre-study Questionnaire)	40

Appendix A: Screening Questionnaire

<https://goo.gl/forms/1luS1kO5zsiYOevx2>

We are a group of Masters students studying Human Centered Design and Engineering at the University of Washington.

We are conducting a study to learn more about the experience of purchasing tickets. We will be holding study sessions on Thursday, February 15th, and each will last 45-60 minutes. Sessions will be held in Seattle.

If you participate in the study, you'll receive baked goods and Theo chocolate. To qualify, please complete the questionnaire below.

If you have any questions, please send them to Kristen at kdem@uw.edu.

How far do you live from downtown Seattle?

0 - 20 miles

21 - 40 miles

41 - 60 miles

Over 61 miles

- Disqualify

In the last 12 months, have you attended a show by any of the below? (Check all that apply)

The Seattle Symphony

The Pacific Northwest Philharmonic - Disqualify

The Seattle Opera

The Pacific Northwest Ballet

Other

When was the last time you purchased tickets online?

In the past 6 months

7 months to 1 year ago

More than one year ago - Disqualify

Never - Disqualify

When was the last time you purchased a ticket using the Seattle Symphony website?

In the past 6 months - Disqualify

7 months to 1 year ago

More than one year ago

Never

How often do you use a desktop or laptop computer?

Multiple times a day

Multiple times a week

A few times a month

- Disqualify

Never

- Disqualify

Do you work in any of the below industries?

Full-time Student

Teaching

UI/UX

- Disqualify

Marketing

The Symphony

- Disqualify

Service Industry (Restaurant, Grocery Store, etc.)

None of the above

Are you available to partake in the study on Thursday, February 15th?

Yes

No

First Name

Last Name

Email address

Phone number

Appendix B: Consent Form

CONSENT FORM

Seattle Symphony Usability Study

Researchers: Andrew Waer, Christina Mauri, Kristen Demarjian, Emily Zeng

PURPOSE OF THE STUDY

We are a group of research students from the Human Centered Design and Engineering Department at the University of Washington. Our goal with this study is to determine the usability of the Seattle Symphony website, but we are not affiliated with the Seattle Symphony.

Your feedback will help us complete the objectives of our course, to conduct a usability study and present our findings to the class.

STUDY PROCEDURES

With your permission we will record your voice, your face, and your interactions with the web site. During this study you will be asked to:

- Work with the website to do a set of tasks
- Think out loud while doing these tasks
- Answer interview and survey questions

The study is expected to take around 45 minutes. If you need a break, please let us know.

CONFIDENTIALITY OF RESEARCH INFORMATION

By signing this form, you give your permission to us to use your statements, and our notes for the purposes of evaluating the website and reporting our findings. With your permission we will record your voice, your face and your interactions with the web site. We will do our best not to share your name or any personal information, all information will be anonymized.

If you need a break, just tell us. You may withdraw from this study at any time. We will do our best to maintain the confidentiality of the information you provide in our study. Your name or any personal information will only be accessible to the research team and will not be used in any presentation or produced document or for commercial purposes. All information will be anonymized.

COMPENSATION FOR STUDY

You will receive baked goods and Theo chocolate for taking part in today's study.

WITHDRAWAL FROM STUDY

During the study, you may decline to answer any questions you don't want to. You may also withdraw from this study at any time without penalty or loss of compensation to which you are otherwise entitled.

SIGNATURES

By signing this form, you give your permission to us to use your statements, our recordings, and our notes for the purposes of evaluating the website and reporting our findings. If you agree with these terms, please indicate your agreement by signing here:

- I agree to participate in the session
- I agree to have the session video recorded, which includes my voice and image

Signature: _____

Please print your name: _____

Date: _____

Printed name of researcher obtaining consent* Signature* Date*

Thank you!

Appendix C: Final scenarios & tasks

Scenario #1

Let's say you want to see a concert with music written by Sibelius at the Seattle Symphony. You would like to go with a friend on a Saturday in March. Show me what you would do to purchase two tickets that

- *Cost less than \$70 each*
- *Have an unobstructed view so you can see the stage*

Scenario #2

Imagine you'd like to go to a Seattle Symphony concert that doesn't last more than 2 hours. Show me what you'd do to purchase tickets for one you'd like to see.

Appendix D: Facilitator Script and Note-taking Sheet

Greeting Participant and Intro (10 min)

Pre-Test

Introduction/Overview

Hello, my name is [researcher's name] and I will be leading this study. This is [notetaker's name] and they will be taking notes during the study. In order to ensure that all participants receive the same information, I will be reading from a script.

For the study today, I will ask you to complete a series of tasks using the Seattle Symphony website. While you are working on the tasks, please think aloud and provide a running commentary of what is on your mind. For example, when you read something on the screen, read it out loud, and when you click on a link on a page, say what you are clicking on.

Please give us your honest feedback on the website - there are no right or wrong answers as we are testing the site and not you. Your feedback will help us understand what does and doesn't work well on the site. We are not affiliated with the Seattle Symphony and we didn't design their website, so you won't hurt our feelings if you say anything negative.

Do you have any questions at this time?

Consent and Pre-Study Questionnaire

Please read over this consent form and sign it if you agree to participate in this study. If you have any questions, please let me know.

<< Hand consent form to participant >>

Warm-up

<<Administer pre-test questionnaire>>

1. How many concerts have you attended at the Seattle Symphony in the past year?
 0
 1-3
 4-6
 7 or more
2. How do you buy your tickets to the symphony?
 - a. Do you do it yourself or does someone else make the arrangements?
 Myself
 Someone else
 - b. How did you book your last ticket?

- Online
- On the phone
- Other: _____

3. Do you have a subscription to Seattle Symphony concerts?
4. Do you donate to the Seattle Symphony?

Test

Here is a copy of the tasks that you will be completing today.

<<Hand participant task list>>

To make sure that we are on the same page, please read each task aloud before you start it. When you think you are done with each task, please let me know.

Scenario A (15 min)

Let's say you want to see a Stravinsky concert at the Seattle Symphony. You would like to go with a friend on a Saturday.

Show me what you would do to purchase two tickets that

- Cost less than \$70 each
- Have an unobstructed view so you can see the stage

NOTES

Scenario B (10 min)

Imagine you'd like to go to a Seattle Symphony concert that doesn't last more than 2 hours. Show me what you'd do to purchase tickets for one you'd like to see.

NOTES

To End Test

(At payment page): 'end the task here - no need to enter any payment information.

Post-Test/Wrap-up (15 min)

Post-study questionnaire (Verbal)

1. What was the best thing about buying tickets?

2. What was the worst thing about buying tickets?

<< Administer Post-Test questionnaire >>

Debriefing

<<Follow up on any remaining questions and answer any of the participant's questions that you weren't able to answer during the study>>

Thank you so much for participating in our study. Do you have any remaining questions about the study? Here are some baked good as a thank you for your participation.

<<Show participant out>>

<<Debrief with observers>>

Appendix E: Counterbalancing Order of Scenarios

We used counterbalancing to control for the order effects of the two scenarios. Here is the order in which each participant received the scenarios:

	P1	P2	P3	P4	P5
First	Scenario #2	Scenario #1	Scenario #2	Scenario #1	Scenario #2
Second	Scenario #1	Scenario #2	Scenario #1	Scenario #2	Scenario #1

Appendix F: Note-taker's Sheets

Date:

Facilitator:

Observer:

Participant:

C	Click	HP	Help (participant)	?	Probe during debrief
B	Back button	HF	Help (facilitator)	+	Positive comment
E	Error	>	Navigates to...	-	Negative comment
F	Frustration	*	Quote @ time		

Scenario A: Find and purchase tickets for a Stravinsky concert

Pathway:

1. Find a concert with music composed by Stravinsky

- Used site search [PROMPT]
 - Found correct concert in search results
 - ↳ "Okay, can you show me another way?"
- Correctly found concert detail page
- Used calendar filters

2. Find Stravinsky concert on Saturday 4/28

- Found seating page for correct date

3. Add to cart two adjacent seats (full view, < \$70/ea)

- Correctly added two tickets to cart
 - Show is on a Saturday
 - Seats are unobstructed view
 - Price is under \$70/ea
- Understood iconography for seating price / view

Date:

Facilitator:

Observer:

Participant:

C	Click	HP	Help (participant)	?	Probe during debrief
B	Back button	HF	Help (facilitator)	+	Positive comment
E	Error	>	Navigates to...	-	Negative comment
F	Frustration	*	Quote @ time		

Scenario B: Find tickets for a concert that's less than 2 hours long

Pathway:

1. Find a concert of interest

Method used to find concert:

- Site search
- Homepage events list
- Calendar
 - Understood filters feature

2. Concert detail page

- Visited concert detail page
- Found concert duration

3. Chooses Seats, and add to cart

- Understood iconography for seating price / view

Any issues with seating chart:

- Correctly added tickets to cart

4. Proceed to checkout

- Finds checkout as guest

Appendix G: Post-Study Questionnaire (Jeff Sauro's SUPR-Q)

Please rate each statement from 1 (Strongly Disagree) to 5 (Strongly Agree).

	Strongly Disagree				Strongly Agree
I will likely return to the Seattle Symphony website in the future.	1	2	3	4	5
It is easy to navigate within the Seattle Symphony website.	1	2	3	4	5
I feel comfortable purchasing from the Seattle Symphony.	1	2	3	4	5
I find the Seattle Symphony website to be attractive.	1	2	3	4	5
The information on the Seattle Symphony website is trustworthy.	1	2	3	4	5
The Seattle Symphony website has a clean and simple presentation.	1	2	3	4	5
The Seattle Symphony website is easy to use.	1	2	3	4	5

How likely are you to recommend this website to a friend or colleague?

Not at all Likely **Neutral** **Extremely Likely**
 0 1 2 3 4 5 6 7 8 9 10

Appendix H: Coded Results

<https://docs.google.com/spreadsheets/d/1s1rmOCBEIgw5eC39RmX7uLI5JfKskDj3Cn8wml2>
[Go/edit#gid=0](#)

3 = Critical

2 = Moderate

1 = Minor

Issue	Feature	Total	Severity	P1	P2	P3	P4	P5
Page loading fails or is slow	All	2	3				✓	✓
Unclear which seats are selected - Realized supposed to go on a Saturday so needs to change the date - has to do it all over again (P5), Thinks needs to re-select seats (P2); Glad noticed add to cart - initially thought he had already put them in the cart, but he hadn't (P3)	Cart	4	3		✓	✓	✓	✓
"There has been an error with your order. Please retry your order. Doesn't know how to buy tickets - probably would be frustrated and say "forget this!"	Cart	1	3				✓	
Cart contents vs expectations do not always align	Cart	4	3		✓	✓	✓	✓
Did not notice expiration time for cart	Cart	1	1	✓				
Timed checkout adds stress to decision	Cart	1	1					✓
Parking promotion page is seen as intrusive or annoying	Checkout	2	1				✓	✓
Concert information sometimes lack details. Ex: Concert duration unknown - "I have no idea on the website" how to find out concert duration, Wants to know: show duration, is there an intermission, is there an opening act	Concert detail page	3	2	✓	✓		✓	
Wants to listen to clips of music	Concert detail page	2	2			✓	✓	
Pages sometimes lack sufficient content	Content	3	2		✓		✓	✓
Filter labels are confusing	Events listing page	1	1			✓		
Sub-navigation (2nd level) is visually unclear	Navigation	1	2					✓
Search doesn't yield any relevant results	Search	2	2	✓	✓			
Search results are not labeled clearly	Search	1	2	✓				
Search filters are confusing	Search	1	1		✓			
Unclear number of tickets available - Would prefer not to be able to look into show for which tickets are mostly unavailable/sold out; Annoyed not shown how few tickets were left	Seating availability	2	2		✓	✓		
Not sure which seats are best - Expects tickets in tiers farthest from stage to be cheapest, Not sure which is best - second tier or orchestra front or middle; Met Opera has a picture of what the view is like from seat - would be nice to have	Seating diagram	4	2	✓		✓	✓	✓
Seat view/image is wanted/unavailable	Seating diagram	4	2		✓	✓	✓	✓
Unclear iconography - Not sure what stars vs. circle and difference colors mean	Seating diagram	4	2	✓	✓		✓	✓
Ticket pricing is hard to comprehend	Seating diagram	3	2			✓	✓	✓
Seating section differences are unclear	Venue diagram	4	2	✓	✓		✓	✓
Confusion about date of current diagram	Venue diagram	2	1	✓	✓			
No easy way to see a condensed list of all upcoming events	Events listing page	1	1		✓			

Appendix I: Participant Profiles (from Screening Questionnaire)

	How far do you live from downtown Seattle?	In the last 12 months, have you attended a performance by any of the below? (Check all that apply)	When was the last time you purchased tickets online?	When was the last time you purchased a ticket using the Seattle Symphony website?	How often do you use a desktop or laptop computer?	Do you work in any of the below industries?
P 1	0 - 20 miles	None of the above	7 months to 1 year ago	Never	Multiple times a day	Full-time Student
P 2	0 - 20 miles	None of the above	In the past 6 months	Never	Multiple times a day	Teaching
P 3	0 - 20 miles	None of the above	In the past 6 months	Never	Multiple times a day	None of the above
P 4	0 - 20 miles	The Seattle Opera	In the past 6 months	Never	Multiple times a day	None of the above
P 5	0 - 20 miles	None of the above	In the past 6 months	Never	Multiple times a day	Full-time Student

Issue	Feature	Total	Severity	P1	P2	P3	P4	P5
Page loading fails or is slow	All	2	3				✓	✓
Unclear which seats are selected - Realized supposed to go on a Saturday so needs to change the date - has to do it all over again (P5). Thinks needs to re-select seats (P2); Glad noticed add to cart - initially thought he had already put them in the cart, but he hadn't (P3)	Cart	4	3		✓	✓	✓	✓
"There has been an error with your order. Please retry your order. Doesn't know how to buy tickets - probably would be frustrated and say "forget this!"	Cart	1	3				✓	
Cart contents vs expectations do not always align	Cart	4	3		✓	✓	✓	✓
Did not notice expiration time for cart	Cart	1	1	✓				
Timed checkout adds stress to decision	Cart	1	1					✓
Parking promotion page is seen as intrusive or annoying	Checkout	2	1				✓	✓
Concert information sometimes lack details. Ex: Concert duration unknown - "I have no idea on the website" how to find out concert duration, Wants to know: show duration, is there an intermission, is there an opening act	Concert detail page	3	2	✓	✓		✓	
Wants to listen to clips of music	Concert detail page	2	2			✓	✓	
Pages sometimes lack sufficient content	Content	3	2		✓		✓	✓
Filter labels are confusing	Events listing page	1	1			✓		
Sub-navigation (2nd level) is visually unclear	Navigation	1	2					✓
Search doesn't yield any relevant results	Search	2	2	✓	✓			
Search results are not labeled clearly	Search	1	2	✓				
Search filters are confusing	Search	1	1		✓			
Unclear number of tickets available - Would prefer not to be able to look into show for which tickets are mostly unavailable/sold out; Annoyed not shown how few tickets were left	Seating availability	2	2		✓	✓		
Not sure which seats are best - Expects tickets in tiers farthest from stage to be cheapest, Not sure which is best - second tier or orchestra front or middle; Met Opera has a picture of what the view is like from seat - would be nice to have	Seating diagram	4	2	✓		✓	✓	✓
Seat view/image is wanted/unavailable	Seating diagram	4	2		✓	✓	✓	✓
Unclear iconography - Not sure what stars vs. circle and difference colors mean	Seating diagram	4	2	✓	✓		✓	✓
Ticket pricing is hard to comprehend	Seating diagram	3	2			✓	✓	✓
Seating section differences are unclear	Venue diagram	4	2	✓	✓		✓	✓
Confusion about date of current diagram	Venue diagram	2	1	✓	✓			
No easy way to see a condensed list of all upcoming events	Events listing page	1	1		✓			

Appendix J: Participant Interest in Seattle Symphony (Pre-study Questionnaire)

Question	P1	P2	P3	P4	P5	Avg
Expressed level of interest in Seattle Symphony	3	3	4	4	2	3.2