

Washington State Ferries: The Rider Experience

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## **Abstract**

With future ferry fleet modernization and electrification on the 10-year horizon, this research aims to explore user experience on the classic Washington State Ferries using these questions:

- How does the design of a historically significant space like the Washington State Ferries system – the ferries themselves as well as the terminals – affect the experience for riders who heavily rely on the ferry?
- Through this exploration, what pain points of riding the Washington State Ferries can be identified for future improvement?

By taking user research approaches – which identify the user as the expert of the product – as well as acknowledging that the design of the built environment creates unique experiences, I explore these questions through multiple research methods. I conducted field observations of 3 ferry routes and distributed a user experience survey. Based on survey results, I recruited participants to engage in my photovoice research, prompting them to take pictures of significant aspects of their personal ferry experience and discuss them during 30-minute interviews.

Through this I uncovered a unique relationship – the commuter identity fosters opportunities for community on the ferry while also defining rider norms. There is a greater desire for engagement in education and interactive technology while a major pain point for riders was access to food. This work is significant in capturing the experience of riders who are reliant on the ferry as their main transportation. Future work might focus on how to implement specific improvements that are consistently identified by ferry riders.

## **Table of Contents**

Introduction.....	1
Literature Review.....	3
Theoretical Approach & Definitions.....	3
Surveys.....	4
Public Life Studies.....	5
Photovoice.....	8
Methodology.....	12
Survey.....	12
Field Observations.....	16
Photovoice.....	20
Results.....	23
Commuter Identity & Community.....	23
Access to Food.....	26
Safety.....	29
Relics of Time.....	31
Technology & Information.....	34
Conclusion.....	36
Next Steps.....	<b>Error! Bookmark not defined.</b>
Reflection.....	<b>Error! Bookmark not defined.</b>
Acknowledgements.....	38
Appendix A: Survey Questions.....	39
Appendix B: Survey Recruitment Materials.....	43
Appendix C: Field Observation Notetaking Template.....	45
Appendix D: Field Observation Analysis.....	48
Appendix E: Email Templates.....	49
Appendix F: Photo Collection Template.....	51
Appendix G: Uploading Instructions.....	52
Appendix H: Interview Script and Questions.....	58
Appendix I: Photovoice Analysis.....	59
Bibliography.....	60

## **Introduction**

Little cognitive effort is required when we experience a place. Tony Hiss defines the skill of passively processing information of our spatial contexts as simultaneous perception in his book, *The Experience of Place*. Hiss describes how simultaneous perception “constantly monitor[s] our surroundings on a subconscious level for information that helps us maintain ourselves and go about our business” (Hiss 1990, 25). This idea brings up the question: How does the design of a space affect the way one interacts or experiences it?

This is a compelling inquiry when considering the Washington State Ferry system, which offers a unique experience compared to other methods of public transportation. One of the main reasons is because the ships are steeped in history. 12 of the 21 currently operating ferries were built between the 1960’s and early 1980’s (Kroman 2023). With an anticipated lifespan of 60 years, the organization’s long-range plan outlines all 12 must retire between now and 2040 (Washington State Ferries and Washington State Department of Transportation 2019, 40). However, the state has had issues procuring a shipbuilder for their hybrid-electric ferry program, with the Suquamish as the last new ferry built in 2018. This stall in progress is largely due to previous legislation restricting Washington State Ferries to only contract with shipbuilding companies based in Washington state, originally passed with the purpose of boosting the state’s economy (Kroman 2023).

Although the state might currently be struggling to make new ferries, it inevitably must occur for the ferry transportation system to survive. But what does that change look like? How might the shift from being on a ferry from a different generation to a brand new one change the experience for its riders? So often, simultaneous perception leads us to consider physical spaces and experiences as permanent fixtures until they change. This thinking guides this paper’s research question, about how one might attempt to record the experience of riding the ferry at before major changes occur. And through this exploration, what can be gleaned about the positive aspects of this experience compared to design or process choices that could be improved on?

While there is previous inquiry on usability and how to document change in the built environment, researchers tend to focus on what can be quantitatively measured in a physical place through methods like post-occupancy evaluations (Hay et al. 2018). This research aims to capture not simply the physical attributes of a ferry, but the experience it provides riders. It is already established that ferries are a vital transportation system for economic stability and tourism, with 17.5 million trips made in the last year (Kroman 2023). In addition, the Washington State Transportation Commission conducts a survey at least once every two years through the Ferry Riders Opinion Group (FROG) survey panel made up of over 25,000 ferry riders. The data from this survey and following interviews “inform Washington State Ferry level of service, customer satisfaction, and decisions related to operations, pricing, planning, and investments” and have helped shape the focus of this research study (Washington State Transportation Commission n.d.).

However, the major gap in knowledge is an understanding of the experience of using these ferries. Ridership statistics on satisfaction alone do not represent the holistic experience of being on a ferry. Why are people using ferries? What do they enjoy doing when riding the ferries? What does the idea of riding the ferries make them reminisce about? How does their current experience create barriers for them? And what are those barriers? This research aims to create a holistic representation of what a ferry riding experience encapsulates by asking the following research question:

- How does the design of a historically significant space like the Washington State Ferries system – the ferries themselves as well as the terminals – affect the experience for riders who heavily rely on the ferry?
- Through this exploration, what pain points of riding the Washington State Ferries can be identified for future improvement?

## **Literature Review**

### **Theoretical Approach & Definitions**

#### *Psychogeography*

The concept of psychogeography has been a key influence on the approach of this project. Its origins can be traced back to a group of Parisian social revolutionaries called the Situationist International during the 1950's (Richardson 2015, 1). One of their founding members, Guy Debord, defined psychogeography as “the study of the specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals” (Debord 1955). Their work recognized the impact the design of the built environment has on the psychology of individuals. An environment's design informs factors such as a feeling of belonging, how to navigate a space, and what actions are acceptable within the space. Psychogeography is “the point at which psychology and geography collide, a means of exploring the behavioral impact of urban place” (Coverley 2006, 10). This project aims to explore the psychogeographic impacts of the design of the ferry for walk-on riders through field observations to better understand rider behavior. In the context of this project, this might look like aspects of the ferry experience that provides riders psychological comfort or annoyance. For example, an individual might state they are drawn to seats by the windows or tend to gravitate towards a certain section of the ferry. These emergent statements are representative of psychogeography.

#### *Experience of Place*

When coupled with the idea of experience of place, this project is further contextualized within urban design principles. Building on Hiss's definition of simultaneous perception, he describes how an individual instinctively assesses an environment by “let[ting] the layout of a place give...an advance reading on...whether we can linger there or need to keep on moving, how relaxed we'll be if we stay, and even whether we'll feel comfortable” (Hiss 1990, 25). If psychogeography is the behavioral impact of a space, simultaneous perception is the explanation of how one understands and takes in information of the built environment. The design of urban spaces plays a key role in both, as Hiss explains “any change made to our surroundings has the potential to affect the way we experience a place” (Hiss 1990, 24). An individual's perception of a place – and their behavior within a space – can be altered through how an urban setting is designed because their simultaneous perception will then assess the space differently.

#### *User Experience*

Considering both psychogeography and experience of place, this project's research methodology stems from user research practices. User experience is a commonly used terminology in the technology sector and popularly defined as “encompass[ing] all aspects of the end-user's interaction with the company, its services, and its products” (Norman and Nielsen n.d.). User experience focuses on the perceptions of the user as they engage with a product and using those expectations or pain points of the user to design a better product. This project expands the definition of a product to encompass a physical space, making user experience another method to approach psychogeography and experience of place. By applying user experience research methods to physical spaces rather than a piece of technology, this project aims to define, quantify, and understand the experience of the ferry as a physical space from the lens of ferry riders.

Often, there is more than just the vehicle of transit to consider in the user experience of public transit. For example, a researcher might consider the “first-mile and last-mile problem (FMLM) [which] refers to the distance traveled before and after using a transit system” (Park et al. 2021, 33). The diagram below demonstrates the multiple attributes that contribute to the user experience of a riding on public transit.

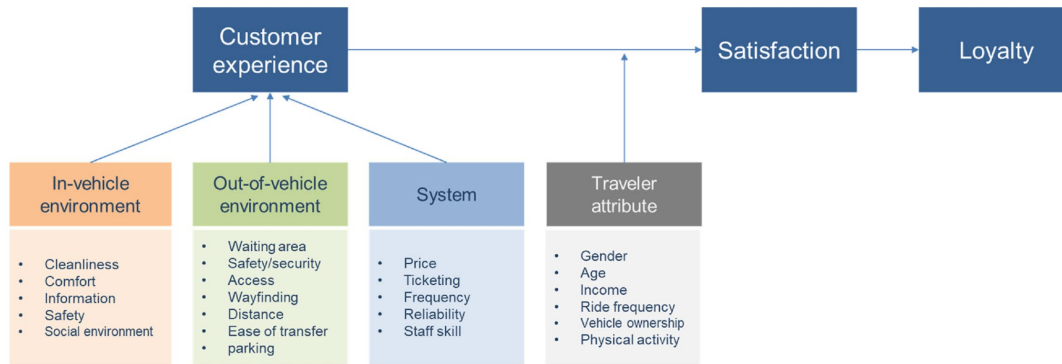


Fig. 1. (Park et al. 2021, 34)

This project’s field observations focus on the in-vehicle or ferry environment, while the photovoice and interviews collect data on the other aspects of the user experience like the out-of-vehicle environment and system. The survey also collects traveler attribute data. With the ability to research on each aspect of the user experience of the ferry through different methodologies, this project aims to capture a holistic understanding of what being a ferry rider looks like.

### *Ferry Rider Population Focus*

This project aims to focus on the experience of ferry riders that rely heavily on the ferry. For this project, these ferry riders are defined as follows and with terms taken from the Washington State Transportation Commission’s Ferry Riders Opinion Group (FROG) survey:

- Ferry riders whose most recent purpose was for:
  - Work commute
  - Work related
  - School commute
  - Medical appointment
- Ferry riders who live on the Washington state islands

### Surveys

This project will be following the survey methodology outlined in *Understanding Your Users: A Practical Guide to User Research Methods* by Kathy Baxter, Catherine Courage, and Kelly Caine. This includes tasks like identifying the objectives of the study and composing questions using a table like the one below to ensure “every question [is] tied to an objective and (ideally) be actionable” as well as creating an analysis plan for each question (Baxter et al. 2015, 273).

Table 10.1: Sample table of objectives, constructs, and questions

Objective	Construct	Question	Options
Track user satisfaction over time	Satisfaction	How satisfied are you with <a href="http://TravelMyWay.com">TravelMyWay.com</a> ?	7-Point scale (Extremely dissatisfied to Extremely satisfied)
Get feedback on new feature	Use	How often have you used the new Agenda Planning feature? (include screenshot)	<ul style="list-style-type: none"> <li>• Never</li> <li>• Once</li> <li>• More than once</li> </ul>
Get feedback on new feature	Satisfaction	(If "Once" or "More than once" is selected, ask) How satisfied are you with the Agenda Planning feature?	7-Point scale (Extremely dissatisfied to Extremely satisfied)
Get feedback on new feature	Open feedback	What are your thoughts about the Agenda Planning feature?	(Open text)
Understand demographics of respondents	Frequency of use	How many times have you booked travel on <a href="http://TravelMyWay.com">TravelMyWay.com</a> in the last six months? You can check this by clicking on the "Account" link in the upper right corner and looking at your history	<ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> <li>• 2</li> <li>• More than 3 times</li> </ul>
Understand demographics of respondents	Customer length	How long have you been using <a href="http://TravelMyWay.com">TravelMyWay.com</a> ? You can check this by clicking on the "Account" link in the upper right corner and looking at your history	<ul style="list-style-type: none"> <li>• Less than a month</li> <li>• 1-6 months</li> <li>• 6-11 months</li> <li>• 1-2 years</li> <li>• More than 2 years</li> </ul>

Fig. 2. (Baxter et al. 2015, 273)

When building the survey, complex designs through branching questions allow for a simple survey from the users' point of view. By pre-testing the survey with a student peer, miscommunications can be addressed before being advertised to respondents. Survey data analysis approaches include descriptive statistics and measures of association.

## Public Life Studies

### *Jan Gehl*

Jan Gehl and his public life studies are pivotal in the urban planning field today. When approaching the study of public life and spaces, Gehl describes how one must "ask questions systematically and divide the variety of activities and people into subcategories...to get specific and useful knowledge about the complex interaction of life and form" (Gehl and Svarre 2013, 11). There are so many people, events, and things occurring in a public space all at once a researcher can take note of. This makes it important to deeply consider what questions should guide observations. Baxter et al. outlines ten focus areas an observable system or environment can be divided into to guide field observations, which will be used in this project:

Table 13.2: Focal points for deep hanging out (Teague et Bell, 2001)

Focal point	Some questions to ask
Family and kids	Do you see families? How many children are there? What are the age ranges? What is the interaction between the kids? Between the parents and the kids? How are they dressed? Is the environment designed to support families/kids (e.g., special activities, special locations, etc.)?
Food and drinks	Are food and drinks available? What is being served/consumed? Where is it served/consumed? When is it served? Are there special locations for it? Are people doing other things while eating? What is the service like? Are only certain people consuming food and drinks?
Built environment	How is the space laid out? What does it look like? What is the size, shape, decoration, furnishings? Is there a theme? Are there any time or space cues (e.g., clocks on the walls and windows to show time of day or orientation to the rest of the outside)?
Possessions	What are people carrying with them? How often do people access them? How do people carry them? What do they do with them? What are people acquiring?
Media consumption	What are people reading, watching, and listening to? Did they bring it with them or buy it there? Where do they consume the media and when? What do they do with it when they are done?
Tools and technology	What technology is built-in? How does it work? Is it for the customers or the company? Is it visible?
Demographics	What are the demographics of the people in the environment? Are they in groups (e.g., families, tours)? How are they dressed? How do they interact with each other? How do they behave?
Traffic	What is the flow of traffic through the space? Was it designed that way? What is traveling through the space (e.g., people, cars, golf carts)? Where are the high-/low-traffic areas? Why are they high-/low-traffic areas? Where do people linger?
Information and communication access	What are the information and communication access points (e.g., pay phones, ATMs, computer terminals, kiosks, maps, signs, guides, directories, information desks)? Do people use them, and how often? How do people use them? Where are they located (e.g., immediately visible, difficult to access)? What do they look like?
Overall experience	Don't forget the forest for the trees. What is the overall environment like? What is the first and last thing you noticed? What is it like to be there? How is it similar or different from similar environments? Are there any standard behaviors, rules, or rituals? (Think high level and obtain a holistic view, rather than concentrating on details.)

Fig. 3. (Baxter et al. 2015, 390)

In tandem with guided field observation notes of public space, different approaches to mapping public spaces are important. Gehl describes how “activities in public space can be divided fundamentally into those that are transitory and those that are stationary” (Gehl and Svarre 2013, 84). By tallying various activities within a public space and mapping out where they occur, these activities can begin to illustrate how the design of a space might inform behavior. See an example of behavioral mapping of Piazza del Popolo, Ascoli Piceno, Italy below where Gehl illustrates the common behavior of staying close to the “edges” of public spaces:

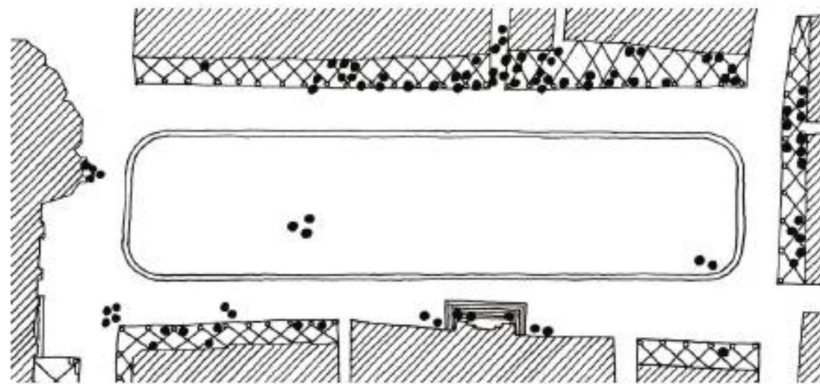
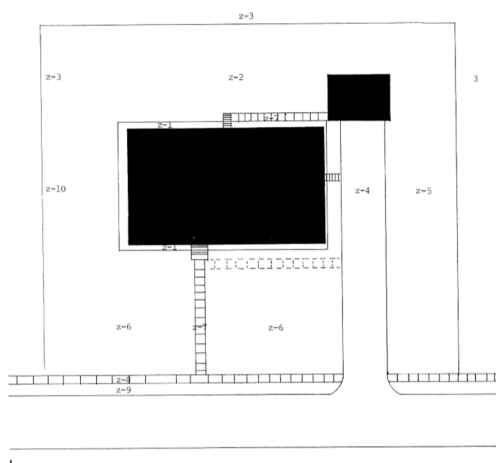


Fig. 4. (Gehl and Svarre 2013, 85)

Another example of mapping public spaces comes in the form of defining zones, such as Robert Mugerauer's division of a midwestern yard. Mugerauer describes that by defining distinct zones within a typical suburban yard, it reveals "yards are a complex ensemble of different spaces...seeing the zones makes clearer the subtle range and styles, or possibilities, for dwelling (Mugerauer 1985, 31). In similar fashion, this project seeks to understand not only behavioral mapping but different zones of the ferry that define where specific behaviors occur. By defining these zones and creating a map of a ferry's typical design similar to Mugerauer's, potential variation or change is easier to imagine.



I "Midwestern Yards: 10 Possible Zones  
 1. inner border: inmost and minimal yard  
 2. back yard proper  
 3. boundary  
 4. drive  
 5. side border  
 6. front yard proper  
 7. walks  
 8. sidewalk  
 9. front border  
 10. side yard"  
 (Drawing by Carol Silverman)

Fig. 5. (Mugerauer 1985, 31)

### *Public Transit as Public Space?*

It is important to recognize public transit as a unique representation of public space and understand how this informs methodology choices. Public transport should not be considered a public space or within the public sphere "simply because it is considered a public good funded by public finances. One could, for example, sit in a corner of a subway car, put in earbuds, read a book and sink into a kind of private cocoon" (Sheller 2023). Public life study methodologies are valuable in this work, but public transit is also a unique setting that might have different features to a public space like a plaza. There are often moments of privacy, described as a "coexistence of both public and private activities and feelings" (Sheller 2023). There is also limited time on public transit like a ferry for activities to occur. This project aims to use observations not only to understand how the ferry is used like a public space, but also private activities and where they occur.

### *Different Methodologies*

There are strengths and weaknesses when considering the different methodologies of observing public life. Stemming from the International Situationists and psychogeography, a

dérive approaches public life observations as both “a playful element...[and] those taking part were expected to be conscious of the environment” (Richardson 2015, 2). This method of observation is tied to the lived experience of the individual conducting the derive; it is reminiscent of autoethnography. For example, during Tony Hiss’s personal account of Grand Central Terminal in New York City he describes how “I noticed once again that no one was bumping into anyone else – that every time I thought I myself might be about to bump into people near me, both I and they were already accelerating slightly, or decelerating, or making a little side step” (Hiss 1990, 8). Hiss’s approach is dérive-like; he is becoming conscious and observant of his environment and experience within a public transit station.

As opposed to a dérive or ethnography, field studies are defined by Baxter et al. in the context of user research. The authors describe “in field studies, the product team drives the goals and thus the topic of the results, whereas in ethnographies, the participants drive the data obtained” (Baxter et al. 2015, 383). The table below outlines the differences between the two:

Ethnography	Field Study
Bias toward discovery	Bias toward answering questions of interest
Exploratory	Guided
Emergent	A priori
Derive design inspiration	Answer specific questions about products
Participant drives topics/results	Product team drives topics/results
Holistic and data-driven	Goal-/question-driven
Point of view: participant	Point of view: product team
Longer immersion (e.g., 3 months-6+ years)	Shorter immersion (e.g., 1 day-6 weeks)

Fig. 6. (Baxter et al. 2015, 383)

This project will be focusing on field studies to conduct public life studies. This is because the focus is largely on the experience of other ferry riders, not the personal experience of the researcher.

## Photovoice

### *Introduction*

Photovoice is a method for qualitative and community-based participatory research, however the use of visual mediums to collect information is widely used in other fields like anthropology (Nykiforuk 2018, 3). The first use of photovoice was published by Caroline Wang and Mary Ann Burris in 1994. Their research focused on rural farming communities in China, assessing “women’s health and socioeconomic needs” in hopes to improve “reproductive health outcomes” (Liebenberg 2018, 1). Their main goal was to educate, incite dialogue, and inform future policymaking of women’s health by utilizing the power of documentary photography (Wang and Burris 1994, 171-172).

From its origins as a method to elevate the lived experiences of women in a small Chinese town, the use and perception of photovoice as a tool for community empowerment continues today. However, there is valuable discussion of photovoice’s potential shortcomings like difficulties in recruiting participants, self-selection bias, and inability to create actionable change. It is important to recognize how these weaknesses occur so researchers may pivot their photovoice methodology to best fit their research context and purpose.

### *Social Justice Origins*

The origins of photovoice as “photo novella” stems from Wang and Burris wanting to promote the lived experiences of a marginalized population – women living in rural areas of China – in their studies. Through the exploration of feminist theory and research, the authors framed the photovoice study as an opportunity for empowerment where they strived to create “an environment where rural women's self-defined concerns entered programmatic and policy discussions” (Wang and Burris 1994, 182). In an analysis of the photovoice method, Linda Liebenberg summarizes the purpose of Wang and Burris’s study as the idea that “women should not be objects of studies but rather active participants” (Liebenberg 2018, 2). Through the framing of photovoice as a method of empowerment for marginalized communities, there is a historically social justice dimension to photovoice research.

Photovoice is one method within the broad idea of community-based participatory research. In a literature review of photovoice, its authors describe how photovoice “expands the representation and diversity of participant voices” (Hergenrather et al. 2009, 694). The perception of photovoice as reputable research method elevating marginalized communities’ voices is a commonly accepted idea. Overall, the broad term of community-based participatory research is “concerned with the democratization of knowledge development as a component of social justice” (Liebenberg 2018, 1). It is a category of research that orients its findings based on the expertise of its participants. The idea of participatory research and design is relevant in multiple fields, from urban planning to technology. In the context of urban planning, community-based research is often coupled with the implication that findings will inform future policies.

#### *Common Biases: Self-Selection & Sample Size*

Photovoice research has weaknesses that are important to recognize. The first is the sheer amount of time and resources required. Wang and Burris described the logistics of “developing and handling film and facilitating regular meetings” as “formidable” (Wang and Burris 1994, 184). This is not only more demanding for researchers, but the intensity and time-consuming nature of photovoice studies adds barriers of entry for participants. In reflection of a photovoice project for the Community Health and the Built Environment (CHBE) project in Alberta, Canada, one group of researchers explained how participation “required approximately five to ten hours of a participant’s time over a three-week period” (Nykiforuk 2011, 115). They pointed out how individuals willing to be in such an involved study tended to be “naturally more involved in the community”, illustrating how self-selection bias might occur (Nykiforuk 2011, 115). These weaknesses can be counterintuitive to the idea that photovoice elevates marginalized community perspectives because they inherently create barriers for individuals to participate.

Additionally, sample size is an important factor to consider. In the same literature review mentioned earlier, the authors explain how “small sample size allows entry into some communities that would have otherwise been restricted” (Hergenrather et al. 2009, 695). A small sample size is argued to be a positive due to the opportunity to focus on a specific community instead of the hegemonic majority. However, the researchers from Alberta reflected on the “small sample size and gender imbalance in each community” as being “their greatest limitation” to creating recommendations or findings that were applicable to the entire city (Nykiforuk 2011, 114) In practice, small samples coupled with difficulty or bias in recruiting leads to results that are hard to use as evidence in pursuit of actionable change.

#### *Participatory Research Promises Change*

The purpose of photovoice research is to uncover lived experiences of a community and incite change through political decision making. Liebenberg argues the presentation of photovoice findings is imperative when striving for change: “Simply displaying images...can result in the research having no impact or even in furthered silencing and marginalization of populations” (Liebenberg 2018, 6) The communication and medium results are presented through is just as important as how participants are engaged and research is conducted. The Alberta researchers’ reflections on the photovoice method echoes Liebenberg’s sentiment, stating “an inherent assumption with photovoice is that its results will ultimately stimulate change...this can only occur if the project is backed by the political desire to change within the community” (Nykiforuk 2011, 105) There needs to be desire or interest from other stakeholders to see change, not just research.

Therefore, to ensure actionable and valuable outcomes, it is important to consider how photovoice findings are presented to stakeholders. Liebenberg suggests focusing on questions like “who findings will be shared with, what findings will be shared with which audiences, and in what ways will these findings be shared” (Liebenberg 2018, 6). Early and consistent engagement with future stakeholders and audiences is important to ensure final findings are valuable and heard. When done in a thoughtful and consistent way, there are many strengths to presenting photovoice. One participant of the Alberta researchers’ project explained their experience: “[It] made me look at myself and made me look at how I could fit better into my community” (Nykiforuk 2011, 119). Photovoice is valuable as a visual medium, providing a reflective experience for its participants and opportunity to communicate this experience through an embodied medium. It is important to be aware of photovoice’s strengths when considering how to effectively present it to stakeholders.

### *Photovoice Variations*

Original photovoice methodology requires “communities to participate fully” in the project question, design, and research process (Liebenberg 2018, 2). However, other approaches include varying levels of participation. The Alberta researchers are a great example of adapting the main elements of photovoice to fit their project’s context and goals. They describe how the “participatory nature of the photovoice project was limited [to]...specific elements of the research” (Nykiforuk 2011, 117). The limitations of participatory elements have positives and drawbacks. While it decreases the time and labor required of participants to be involved in the study, it may discourage uncovering findings not already expected by researchers. The researchers from the Alberta project also described how they would experiment with their photovoice methodology in the future, deviating even further from the original methods. For example:

1. “A cap on the number of photographs...each participant can take”
2. “Accompanying participants while they are taking the photographs in ‘go-along’ photovoice methodology”
3. “Use of videography” (Nykiforuk 2011, 120-121)

This illustrates the different ways photovoice can be designed to adapt to the needs, background, and objectives of the project being pursued.

Another study by Meenar et al. focused on understanding the experience of living in transitional urban neighborhoods used both photovoice and interviews (Meenar and Mandarano 2021, 4-5). This variation not only prompted photos focused on participant likes, dislikes, and desires for improvement within their own community, but also had them self-assign the emotion

behind their photos in a post-interview. By providing room for elaboration behind the motivation of the photo, analysis of the photos in conjunction with the interviews were conducted. This research project seeks to conduct something of similar breadth, with the connection between photovoice and interviews as well as data analysis methods used.

### *Conclusion*

Overall, photovoice as a methodology of community-based participatory research stems from the ideal that knowledge comes from lived experience and attempts to capture this through a visual medium. Photovoice continues to be used and perceived as a tool for community empowerment. Yet the weaknesses of photovoice have the potential to undermine the method's original purpose. Difficulties in recruiting participants, self-selection bias, and inability to create actionable change are all potential pitfalls when conducting photovoice research. As researchers attempt to incorporate this methodology into their projects, it is important to acknowledge these weaknesses and understand how to tailor the design of their research to best address this in the context of their specific topic.

## **Methodology**

### Survey

#### *Goal*

Collect basic data on ferry riders such as what they do on the ferry, their frequency of ridership, and demographics.

#### *Research Questions*

- How do riders spend their time on the ferry?
- What does a typical ferry ride routine look like for riders?
- What memories does the ferry bring up for riders?

#### *Participants*

Participants who have rode the ferry in the last year.

#### *Question Rationale & Plan for Analysis*

	Question	Rationale & Plan for Analysis
Screening Question <i>This question determines your eligibility for this survey.</i>		
1	Have you ridden the ferry at least once in the past year?* <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	Screening question to determine eligibility of respondent. Will remove results of anyone who does not respond with “Yes”.
Section 1: Your Experience on the Ferry		
2	How long have you been riding the Washington State Ferries?* <ul style="list-style-type: none"> <li>• Less than 6 months</li> <li>• 6 to 11 months</li> <li>• 1 to 5 years</li> <li>• 6 to 10 years</li> <li>• Greater than 10 years</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Modeled after Washington State Ferry Winter Performance Survey (Washington State Transportation Commission 2023). Will filter and cross tabulate based on this variable to compare respondents.
3	What route did you use for your most recent ferry ride?* <ul style="list-style-type: none"> <li>• Anacortes / San Juan Islands</li> <li>• Coupeville / Pt. Townsend</li> <li>• Mukilteo / Clinton</li> <li>• Edmonds / Kingston</li> <li>• Seattle / Bainbridge Island</li> <li>• Seattle / Bremerton</li> <li>• Fauntleroy / Vashon</li> <li>• Fauntleroy / Southworth</li> <li>• Southworth /Vashon</li> <li>• Pt. Defiance / Tahlequah</li> <li>• San Juan Interisland</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Modeled after Washington State Ferry Winter Performance Survey (Washington State Transportation Commission 2023). Will filter and cross tabulate based on this variable to compare respondents.

4	<p>What was the destination of your most recent ferry ride?*</p> <p><i>Select the terminal you were arriving at.</i></p>	<p>Will only show multiple choice options based on the answer to Question #3. Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.</p>
5	<p>At what time was your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• Morning (5am to 12pm (noon))</li> <li>• Afternoon (12pm to 5pm)</li> <li>• Evening (5pm to 9pm)</li> <li>• Night (9pm to 5am)</li> </ul>	<p>Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.</p>
6	<p>What is the primary purpose of your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• Family/friends</li> <li>• Recreation</li> <li>• Work commute</li> <li>• Work related</li> <li>• School commute</li> <li>• Shopping</li> <li>• Medical appointment</li> <li>• Special events</li> <li>• Personal</li> <li>• Other</li> </ul>	<p>Demographic question to determine what type of ferry rider the respondent is. Modeled after Washington State Ferry Winter Performance Survey (Washington State Transportation Commission 2023). Will filter and cross tabulate based on this variable to compare respondents.</p>
7	<p>Would you like to elaborate on the primary purpose of your most recent ferry ride?</p>	<p>Open-ended short answer question to allow for further elaboration of Question #6. Opportunity to capture qualitative data and compare it to quantitative data in Question #6.</p>
8	<p>How did you board the ferry for your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• Walk-on</li> <li>• Car</li> <li>• Bus</li> <li>• Bike</li> <li>• Motorcycle</li> <li>• Other</li> </ul>	<p>Demographic question to determine what type of ferry rider the respondent is. Modeled after Washington State Ferry Winter Performance Survey (Washington State Transportation Commission 2023). Will filter and cross tabulate based on this variable to compare respondents.</p>
9	<p>Did you ever leave your car during your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• I left my car during my ferry ride</li> <li>• I stayed in my car during my ferry ride</li> <li>• Other</li> </ul>	<p>Only available if the respondent selects “Car” to Question #8. Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.</p>
10	<p>During your most recent ferry ride, what did you do once you finished boarding the ferry?*</p>	<p>Open-ended short answer question to generally understand what ferry riders typically do after they board. Will</p>

	<i>For example: I walk all the way from where I entered the ferry to the opposite end and take a seat in that area so I can get off the ferry quickly once it arrives.</i>	conduct affinity analysis and pull greater themes out of responses.
11	<p>During your most recent ferry ride, what activities did you spend the majority of your time on the ferry doing?*</p> <p><i>Check all that apply.</i></p> <ul style="list-style-type: none"> <li>• Work</li> <li>• Walking</li> <li>• Sleeping</li> <li>• Reading</li> <li>• Listening to music/Watching a movie</li> <li>• Using phone</li> <li>• Playing games/Doing puzzles</li> <li>• Exploring the ferry</li> <li>• Making conversation</li> <li>• Nothing</li> <li>• Other</li> </ul>	Checkbox question where respondent can select all options that apply. Compare to see if it aligns with the Question #10.
12	Would you like to elaborate on any of the activities you did during your most recent ferry ride?	Open-ended short answer question to allow for further elaboration of Question #11. Opportunity to capture qualitative data and compare it to quantitative data in Question #11.
<p>Section 2: Optional Demographics</p> <p><i>The following are demographic questions so that I may have a better understanding of the background and diversity of my participants! These questions are all <b>optional</b>. Please do not answer anything you feel uncomfortable sharing.</i></p>		
13	<p>What is your age?</p> <ul style="list-style-type: none"> <li>• Under 18 years</li> <li>• 18 to 24 years</li> <li>• 25 to 34 years</li> <li>• 35 to 44 years</li> <li>• 45 to 54 years</li> <li>• 55 to 64 years</li> <li>• 65 years or over</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.
14	<p>What is your gender?</p> <ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> <li>• Nonbinary</li> <li>• Self-identify</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.
15	<p>Please select one of the following that best describes your average household income.</p> <ul style="list-style-type: none"> <li>• Under \$35,000</li> <li>• \$35,000 to \$49,999</li> <li>• \$50,000 to \$74,999</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Modeled after Washington State Ferry Winter Performance Survey (Washington State Transportation

	<ul style="list-style-type: none"> <li>• \$75,000 to \$99,999</li> <li>• \$100,000 to \$149,999</li> <li>• 150,000 or more</li> </ul>	Commission 2023). Will filter and cross tabulate based on this variable to compare respondents.
16	<p>Please select one of the following that best describes your racial or ethnic identity.</p> <ul style="list-style-type: none"> <li>• American Indian or Alaska Native</li> <li>• Asian or Asian American</li> <li>• Black or African American</li> <li>• Hispanic or Latino/a</li> <li>• Middle Eastern or North African</li> <li>• Native Hawai'ian or Pacific Islander</li> <li>• White or European</li> <li>• More than two races</li> <li>• Self-identify</li> </ul>	Demographic question to determine what type of ferry rider the respondent is. Will filter and cross tabulate based on this variable to compare respondents.
<b>Section 3: Further Research</b>		
17	<p>Would you be interested in participating in further research related to the experience of ferry riders?*</p> <p><i>This might entail being prompted to take photos of a future ferry ride or participating in interviews. You get to decide!</i></p>	Multiple choice question to see if respondent would be interested in participating in further research.
18	<p>First and Last Name*</p> <p><i>You selected yes to being interested in participating in further research. Please provide your name.</i></p>	Only available if the respondent selects "Yes" to Question #17. Short-answer question to get contact information.
19	<p>Email*</p> <p><i>You selected yes to being interested in participating in further research. Please provide your email as a method of contact.</i></p>	Only available if the respondent selects "Yes" to Question #17. Short-answer question to get contact information.
20	<p>I am conducting a <b>photovoice study</b> – which allows participants to <b>tell the story of their own ferry experience through photographs</b>. I would provide prompts to guide the topics of your photos. Would you be interested in participating in this more creative method of research?*</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	Multiple choice question to see if respondent would be interested in participating in further research.
21	<p>I am conducting <b>interviews</b> on the experience of ferry riders, including <b>past memories</b> you might have. Would you be interested in participating in this more in-depth method of research?*</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	Multiple choice question to see if respondent would be interested in participating in further research.

22	<p>You selected yes to being interested in participating in interviews. Where would you be comfortable doing interviews?*</p> <ul style="list-style-type: none"> <li>• Zoom/video call</li> <li>• Phone call</li> <li>• In-person</li> </ul>	<p>Only available if the respondent selects “Yes” to Question #21. Multiple choice question to see if respondent would be interested in participating in further research.</p>
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\*Required question

The full survey can be found in [Appendix A](#).

### *Recruitment Methods*

To recruit participants for the survey, online outreach was conducted with the following organizations:

- Washington State Transportation Commission’s Ferry Rider Opinion Group
- University of Washington’s Human Centered Design & Engineering, Community, Environment & Planning, and College of Built Environment emails or Slack forums
- Young Professionals in Transportation, Seattle
- National Organization of Minority Architects, Northwest Chapter

3 in-person recruitment sessions on the ferries were also conducted at noon on Fridays for the Seattle/Bainbridge, Seattle/Bremerton, and Edmonds/Kingston routes. Ferry riders were individually approached with a poster about the survey with a QR code and asked if they would feel comfortable filling it out.

Although respondents were not explicitly asked what brought them to the survey, a majority of the 817 responses are assumed to be from the Washington State Transportation Commission’s Ferry Rider Opinion Group based on timing of responses. On one hand, this was valuable in getting respondents that were passionate, interested, and already invested in the ferries. On the other hand, this meant the demographics of respondents were majority white and higher household income. But when keeping in mind the demographics of the islands around the Puget Sound, this may still be representative of who typically uses the ferries in general (Washington State Department of Health. n.d.).

Advertising materials can be found in [Appendix B](#).

### *Survey & Analysis Tools*

The survey was implemented through Microsoft Forms. It has better functionality in allowing for branching questions and is a format familiar to survey participants. Microsoft Forms directly populates answers into an Excel spreadsheet, which was used for quantitative data analysis while Tableau was used to create data visualizations. Due to volume of responses and time constraints, the original plan to conduct thematic analysis of open-ended questions using Miro was disregarded to focus solely on quantitative data.

### Field Observations

#### *Goal*

Understand typical behaviors and activities ferry riders do during their ride. Additionally, taking note of how the design of the built environment is both encouraging or deterring certain behaviors for ferry riders.

### *Research Questions*

- How do riders spend their time on the ferry?
- What is rider behavior like on the ferry?
- How is the space on the ferry segmented into different zones for different behaviors?

### *Participants*

Participants who are walk-ons or spend most of their time outside of their car when in the ferry. Specifically, participants who do certain activities on the ferry such as working or socializing.

Ferry riders who use their car and stay in the car during the ferry ride have a very different experience and was not an appropriate focus of field observations given this project's goals.

### *Areas of Focus*

To create consistency in each field observation, six major areas of focus were identified to guide notetaking. These were decided on based field observation goals to understand typical ferry rider behaviors and activities:

- Information and Communication Access
- Possessions
- Media Consumption
- Demographics
- Built Environment
- Overall Experience

Additionally, a map illustrating the layout of the space was sketched out during each observation. This was to take note of the design of the built environment as well as how crowded each section of the ferry was during the ride. Illustrations taken from the Washington State Ferry website of the seven different possible ferry layouts were printed to use for notes as well (Washington State Department of Transportation. n.d.).

The guiding questions for each area of focus and WSF ferry diagrams can be found in [Appendix C](#).

### *Overall Logistics*

Observations were conducted during ferry rides at the Seattle/Bainbridge, Seattle/Bremerton, and Edmonds/Kingston routes. These routes were chosen for their high ridership as routes based on survey responses as well as physical ease of access for the researcher. For each ferry ride, 5-10 minutes were spent in each space or "zone" within the ferry, so that each part of the ferry is equally observed. The areas of focus and specific questions were written in a journal beforehand so notes and maps could be written on paper easily.

Two ferry ride observations at each route were conducted, resulting in 6 two-way ferry rides and 6 field observations overall. Field studies were only conducted for one direction of the ferry ride, which means the time varied depending on the route taken. Observations were conducted in January during the work rush hour of 5:30PM on Wednesdays and the typical leisure time of 12PM on Saturdays. These dates and times were determined using the Washington State Ferry’s website documenting typical traffic conditions (Washington State Department of Transportation. n.d. “Best) and their sailing schedules (Washington State Department of Transportation. n.d. “Schedule). The one thing not known before each field observation was the specific ferry ridden.

Field observations took place for 3 consecutive weeks, with each week on a new ferry route. This created consistency and allowed observations of participants who are both on the ferry for the purpose of work and socializing. For the ride back on the ferry, video recordings were conducted instead of traditional notetaking field observations. This was to obtain recordings for a final video documenting the ferry riding experience and reflecting on the outcomes of this project.

Date	Route	Time	Crossing Time	Observe v. Videotaping
1/17/2024	Edmonds to Kingston	5:25PM	~30 minutes	Field Observation #1
	Kingston to Edmonds	6:10PM		Record Video
1/20/2024	Edmonds to Kingston	11:05AM		Record Video
	Kingston to Edmonds	11:55PM		Field Observation #2
1/24/2024	Seattle to Bremerton	5:30PM	~60 minutes	Field Observation #3
	Bremerton to Seattle	6:40PM		Record Video
1/27/2024	Seattle to Bremerton	12:20PM		Record Video
	Bremerton to Seattle	1:30PM		Field Observation #4
1/31/2024	Seattle to Bainbridge	5:45PM	~35 minutes	Field Observation #5
	Bainbridge to Seattle	6:40PM		Record Video
2/3/2024	Seattle to Bainbridge	11:25AM		Record Video
	Bainbridge to Seattle	12:20PM		Field Observation #6

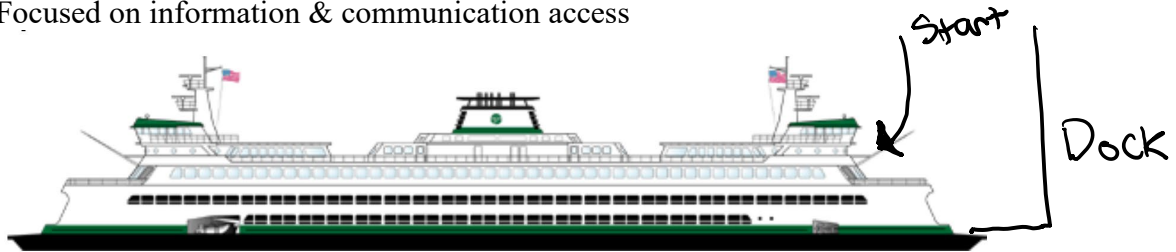
### *Detailed Protocol*

To get ready for each study session:

- Informed Washington State Ferry contact of dates that field observations were conducted to receive tickets
- Brought backpack with phone, journal, pens, chargers, water bottle; majority of notes were taken in a journal
- Prepared journal for notetaking by writing out notes template from [Appendix C](#)
- Prepared images of ferry layouts by printing out diagrams below; checked Washington State Ferry website the day of to determine the ferry that was ridden (Washington State Department of Transportation. n.d. “Vessels)
- Arrived at the ferry 15 minutes early and checked its arrival status through Vessel Watch (Washington State Department of Transportation. n.d. “Real-time)

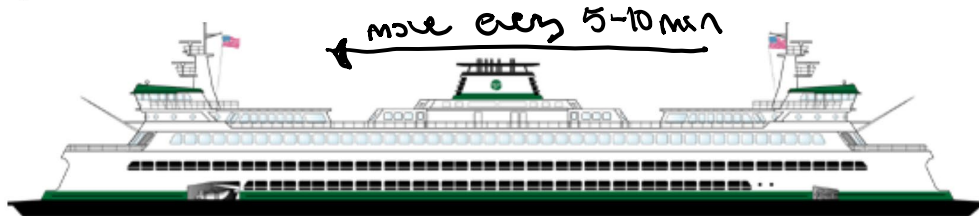
At the beginning of each study session:

- Although field observations were generally focused on the actual ride, still stayed aware and took note of how the ferry was loaded and if there was noticeable traffic
- Found a space to sit in the chairs immediately at the entrance of the ferry
- Took pictures of space
- Focused on information & communication access



During each study session:

- Every 5-10 minutes, moved further down each section of the ferry so by the end the observation has completed at the side of the ferry closest to the terminal
- Paid close attention to what people were doing on the ferry and how they are grouped together
- Took laps to tally possessions, media consumption, and demographic observations
- Focused on approximate age ranges for individuals



At the end of each study session:

- Ensured notes are saved



After each study session is over:

- Focused on built environment on the way back while recording video
- Cleaned up notes
- Added personal thoughts and reflections as well as any immediate comparisons to other ferry rides

### *Analysis*

After finishing the field observations, important notes were taken from the Word document and transferred to a Miro board as a sticky note. These were grouped together into an affinity diagram. The affinity diagram was used to identify common trends between ferry rides but allow

for comparison between ferry rides as well through demographics observed, built environment, and media consumption. These common trends informed results on the current state of the ferry rider experience as well as opportunities to improve it.

See affinity analysis diagram in [Appendix D](#).

### Photovoice

#### *Goal*

Understand the user experience from the ferry rider and commuter point of view. By using photos to ask about likes, dislikes, and what they would like to see more of during their ferry ride, these photos facilitate greater conversation in interviews about the participant's ferry ride.

#### *Research Questions*

- How do riders spend their time on the ferry?
- What does the ferry represent to riders?
- What memories does the ferry bring up for riders?

#### *Participant Selection*

With the user experience survey asking if respondents would be interested in participating in further research, there were over 600 potential individuals that could have engaged with this project further. The following criteria based on survey responses was used to determine who would be eligible to participate in this project's photovoice exercise:

- They selected "Yes" to being interested in participating in both photovoice and interviews
- They did not select only "In-Person" for their ideal interview method
- During their most recent ferry ride, the purpose had to be a medical appointment, work related, work commute, school commute, or returning home
- During their most recent ferry ride, they had to be a walk-on or left their car

Based on this narrower pool of survey responses, 2-3 people from each route were selected with special attention on diversifying the sample through household income, age, gender, and race. Although participant selection was conducted in a methodological way, it is important to note the photovoice participant pool chosen is not representative of all ferry riders. In total, 21 people were sent an email with further instructions on photovoice and interview research. A total of 11 participants responded and completed both.

#### *Photo Prompt & Collection*

Participants were instructed through email to use their personal cell phones to take and upload photos following these prompts:

- Take 3 photos of things that you liked about your ferry ride
- Take 3 photos of things that you disliked about your ferry ride
- Take 2 photos of things that you would like to see more of during your ferry ride

These three prompts were vague enough to allow greater flexibility for participants to take photos of what catches their interest while still being denoted as like/dislike/improvements.

However, they could only take a small amount of each, requiring thought and care to be put into the subject they chose for their photos. The email template sent to participants can be found in [Appendix E](#).

Using Google Drive, a private folder was created titled CEP Senior Project. Within this folder, a photo collection document was created for each individual participant and shared with them to upload their photos. While participants were prompted to upload their photos to the Google Document and provided instructions if this was a new process to them, they were also encouraged to share through email if necessary. This flexibility was important because of the potential variation in technological literacy across the different participants. The photo collection template can be found in [Appendix F](#) and instructions shared on how to upload onto a Google Doc can be found in [Appendix G](#).

### *Interviews*

Calendly was used to set up 30-minute time slots for interviews based on availability. Continuing to be accommodating with participants' technological literacy, interviews were conducted in-person at University of Washington's Seattle campus, over phone call, and over video call based on participant preference. After asking the permission of the participant, the interview was audio recorded for the most accurate data. Word document was used to create and clean a transcript from the recording. Notes during the interview were taken in a journal on pen and paper to reflect on specific pieces of the interview that stood out at the time.

### *Question Rationale*

	Question	Rationale
1	Why do you ride the ferry?	Shifts the topic to the ferries while still being a generic opening question to create a comfortable environment for a casual conversation.
2	For each photo: What was the reasoning behind taking this photo?	Using the photo as a prompt, learning the underlying motivation behind the photo.
3	Do you have any memorable experiences from your time riding the ferry?	Focuses more on memories and recalling further into the past, attempting to better understand what the ferry might mean or represent to this participant.

A semi-structured interview method was taken. The detailed interview script and prepared potential follow-up questions can be found in [Appendix H](#).

### *Analysis*

Qualitative content analysis of photos was conducted using Miro. Coding of interviews was conducted using Excel, with each sentence coded. After coding each interview, a memo with written reflection focusing on major themes or ideas that emerged was created using a Word document. The Miro board of pictures and greater themes identified from the memos were then grouped together in a Miro board through thematic analysis. This was used to identify common trends between ferry riders' experiences. These common trends – coupled with survey and field

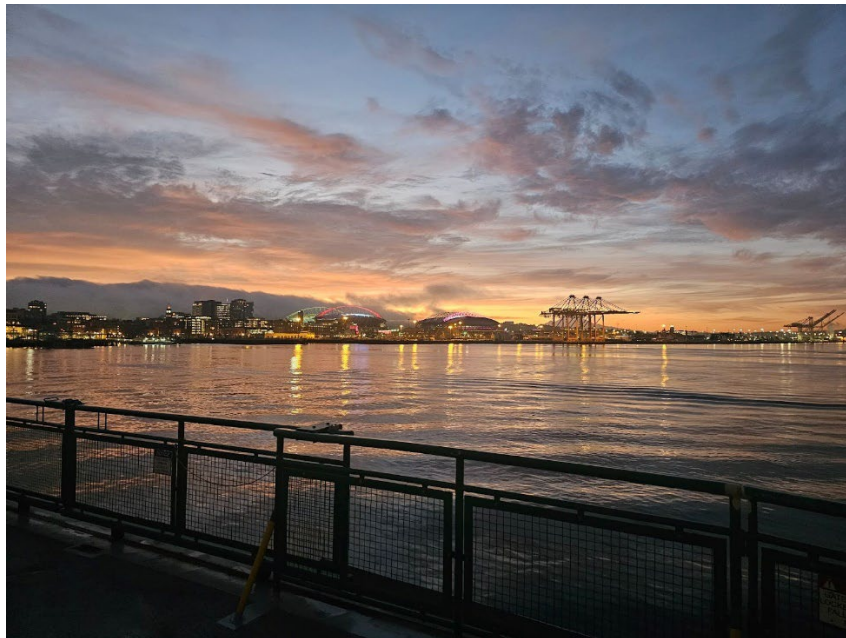
observation data analysis – informed final results on the current state of the ferry rider experience as well as opportunities to improve it.

See qualitative content analysis of photos and final thematic analysis diagram in [Appendix I](#).

## **Results**

### **Commuter Identity & Community**

Throughout the photovoice project, a recurring theme emerged: participants felt a special significance attributed to using the ferries as their regular commute. Being a ferry-riding commuter and living on the islands was a clear part of their identity. One participant said, “the fact that I can just walk on that boat and cross that water and go to work is really lovely, both visually and psychologically” (P3, Line 42-44). Many participants echoed this sentiment, viewing their daily ferry commute as a privilege.



*Fig. 7. "That's a yet another morning picture of how much I love that. Like behind that is majesty" (P7, Line 199-200)*

An anecdote from one participant encapsulates this perspective. They described a moment when they overheard another ferry rider discuss their substantial salary. Sitting with their child, they realized “that was the moment where I went, I'm ok. I chose this. I love this. I have all my kids. And we're coming back from a dentist appointment on a boat!” (P10, Line 322-324). This illustrates how ferry riders see themselves as unique individuals that have a deeper, more personal relationship with the ferries opposed to tourists or other riders.

Some participants also expressed a desire to distinguish themselves within the ferry ticket reservation system. One participant articulated they wanted to see this change because “come August, if I have a funeral to go to or a doctor's appointment it's hell trying to get a reservation” (P3, Line 292-294). For commuters and islanders, the ferry is essential for attending significant life events. These distinguishing factors further solidify the idea that a commuter – someone who lives on the islands and relies on the ferry for daily travel – is a distinct identity for these participants.

It is worth noting that survey demographics reflect the homogeneity of this identity. Consistent with previous surveys conducted by the Washington State Transportation

Commission, respondents were predominately white, older, and had a household income exceeding \$100,000, and a slight skew towards females (Washington State Transportation Commission 2023).

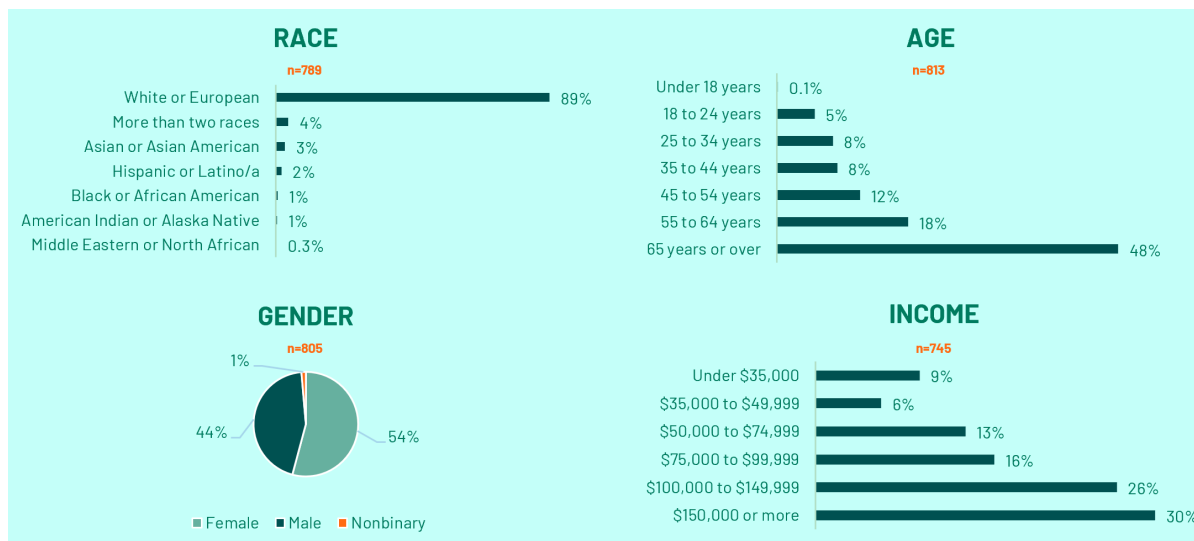


Fig. 8. Demographics of survey respondents.

With shared identity comes a sense of community, which is evident on the ferry. Only during rush hour field observations – where commuters dominate ridership – were there interactions between people who did not come on the ferry together were observed (Obs. 3, Line 97-100) (Obs. 5, Line 89-92). These interactions involved recognizing familiar faces such as “an elderly man sitting on cafe table working on laptop sees someone familiar, a woman who just bought popcorn and is sitting at a table nearby” (Obs. 5, Line 89-90). These observations were confirmed by photovoice participants, emphasizing the community fostered through interactions with other commuters as well as a close relationship with ferry staff. One participant explained how their route’s regular deck hand “always makes my 18-hour days feel shorter when I see her...She just always has such great positive energy...She is definitely my number one favorite thing about my commute.” (P11, Line 27-31). The familiarity and consistency with seeing the same people on the ferry daily and being able to build relationships on their ferry ride creates a strong sense of community for commuters.



*Fig. 9. "I feel very protected by the ferry workers. I feel like they could be somebody who, if I'm transporting by myself, could come to my aid if I had troubles and needed to rely on another human being" (P2, Line 18-20)*

Additionally, shared identity and community on the ferry entails unspoken social norms. Commuters inherently understand ferry rider norms and often become frustrated when newcomers or tourists fail to follow them. For example, slow onboarding or offboarding disrupts the flow of commuter traffic – especially if a commuter is trying to catch the bus after the ferry (P8, Line 122-128). There are also unspoken rules about the use of space on the ferry, like designated areas for quiet time: “the forward-facing seats on either side...[or] what we call the library. Which is upstairs on the sun deck, that closed off room” (P7, Line 172-175). By understanding these social norms, one can begin to question how the design of these spaces can better serve their purpose. For example, another participant called the tables and benches divided by partitions “offices” (P8, Line 41-42). And these tables described as offices are where most people were working on their laptops during rush hour field observations (Obs. 3, Line 56). This claim is supported by survey data, where a high percentage of commuters reported doing work during their ferry ride. Therefore, if this space is often used as a workspace, it could be improved upon by adding power outlets and reliable ~~WiFi~~ Wi-Fi so riders can effectively use their laptops as they work (P4, Line 254-255).



*Fig. 10. Common activities for commuters by percentage.*

### Access to Food

Food serves as a catalyst for fostering community onboard the ferry. Field observations highlighted the galley as a gathering space for commuters (Obs. 3, Line 117-118). The unique design of the galley is distinctive to other parts of the ferry with its red color scheme, floor pattern, and fluorescent light fixtures (Obs. 4, Line 116-118). This was confirmed by participants, with one explaining that photo of a beer in the galley “represents sitting in [there] at the end of the day. And it's not always drink a beer. You know, sometimes just sit around with your buddies. But it's – there is a community aspect at the end of the day” (P7, Line 106-108). However, how COVID-19 pandemic greatly affected the galley’s reliability and hours with another participant lamenting how the galley “was a hub of the community that's no longer there” (P2, Line 221-222).



Fig. 11. "Just knowing if the galley is gonna be open, it still seems very hit or miss...do we need to bring dinner with us?" (P3, Line 230-232)

Moreover, the logistical issue of the galley's size was pointed out by another participant. They explained how "one of the biggest complaints...some of us have with [the Chimacum] is, the galley is tiny" because during large events like game days, there is not enough space for everyone (P7, Line 137-143). During Seattle/Bainbridge field observations, the galley became so crowded that passengers created makeshift arrangements, standing around the emergency fire stations due to lack of seating (Obs. 5, Line 87). The physical dimensions of the galley, therefore, is ~~an~~ a crucial factor in future ferry design considerations. While it would not be necessary to increase the size of the galley, it would not be advised to decrease its size.

Access to food not only facilitates community but plays a pivotal role in commuters' daily routines – the ferry schedule is central in their lives. Disparities in food availability between ferry terminals underscored the importance of terminal design. One participant described the old terminal as a transitory space with "Commuter Comforts, which served food and was a little bar...[and] a pizza place" but described the new terminal as "dead...There's nothing happy about the terminal" (P7, Line 258-264). They went on to explain it was a more stressful ordeal to have a late or cancelled ferry with nothing to do at the new terminal and no food available (P7, Line 264-267). The current design of the new Seattle ferry terminal exacerbates feelings of frustration with late or cancelled ferries because there is nothing to do at the terminal except wait for the ferries to come – making commuters feel they are wasting precious time.



*Fig. 12. "I love, it's like such a community staple...I would definitely recommend the ferry store over like the hotel for food, even though it's like a convenience store" (P6, Line 144-146)*

Furthermore, zoning regulations around ferry terminals impact food accessibility, particularly for island residents. One participant from Orcas Island highlighted how appreciative they were of the Orcas landing ferry store because "it's nice to be able to...stop and get food and not have to like drive 40 minutes...to an hour to just go grocery shopping" (P6, Line 150-152). The Orcas ferry landing provides riders with easy access to these amenities if a ferry is running late, the galley is closed, or it is during meal time. However, other ferry landings do not have this amenity and riders are responsible for obtaining their own food. A participant from Lopez Island stated there used to be a small trailer through Washington State Ferries that sold food, but now the nearest store is miles away. They have resorted to always bringing food with them in the car when they take the ferry just in case there are delays or cancellations, leaving them stuck in line for hours with nothing to eat (P10, Line 230-239).



*Fig. 13. "So that was all the kids... trying to eat snacks. I was trying to keep them entertained...So, we're sitting in the galley, but the galley's actually closed" (P10, Line 272-274)*

These disparities between routes underscore the need for equitable access to food amenities across ferry routes, especially for communities reliant on ferry transportation. It is important for the galley to have consistent hours, but it would still only be typical working hours. Therefore, it is vital there are food and drink options available for riders near the ferry landings – especially when ferries are consistently having delays or cancellations. While addressing these challenges may involve urban planning and zoning considerations beyond the purview of the Washington State Ferries (WSF), recognizing the impact of terminal design on commuters' experiences remains critical for enhancing overall satisfaction and convenience.

### Safety

Observations during fieldwork revealed the absence of homeless populations aboard the ferries, prompting inquiry into the ferry system's design as a deterrent to vulnerable populations. Participants provided contrasting views on the new Seattle ferry terminal's design in this regard. One participant described the new terminal as "dead" and describing there is "nothing happy about the terminal" without food amenities and community spaces (P7, Line 263-264). On the other hand, another participant felt the new terminal was more efficient because there is nothing but seats which means "everybody is there for a purpose" (P5, Line 74-75). They felt the old often had "a whole bunch of hangout people" (P5, Line 71-72). While not explicitly called out, populations experiencing homelessness were considered implied as people who "hung out" there.

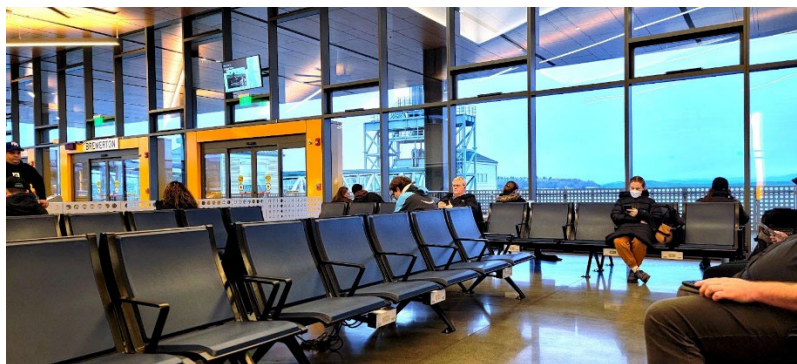


Fig. 14. "The new terminal is really nice. It's really big...It's got great big windows all over the place. And the old ferry terminal, there was no windows. You know, it's...so it's a lot lighter, a lot nicer" (P5, Line 48-53)

Because the old terminal was designed to create a comfortable place for ferry riders to wait in mind, this invited individuals to spend time around the terminal who were not there to ride the ferry. The design of ferry terminals, coupled with barriers to entry, aims to deter unauthorized individuals from accessing the ferries. There are turnstiles or gates that only move when a ticket or pass is scanned, and employees monitor the entryways, restricting entry to paying passengers (Obs. 3, Line 12). While these measures contribute to safety and security onboard, they also shape perceptions of inclusivity and accessibility.

For San Juan County in particular, the lack of resources on the islands exacerbates the deterrent effect of homeless or vulnerable populations. As expressed by one participant, the county "doesn't have inpatient mental health services at all...If people are having a mental health crisis, they [have to] leave to go off island" and for people who are housing insecure the area is "such a relationship-based housing market" (P6, Line 349-354). This is a clear representation of why the commuter identity is often so homogenous – there are clear systemic challenges that island communities are unable to support. There is no purpose for vulnerable and homeless populations to use the ferry system if its destination does not provide them with necessary resources and support. This underscores the need for holistic approaches to address homelessness and housing insecurity, recognizing the interconnectedness of transportation, social services, and urban planning.

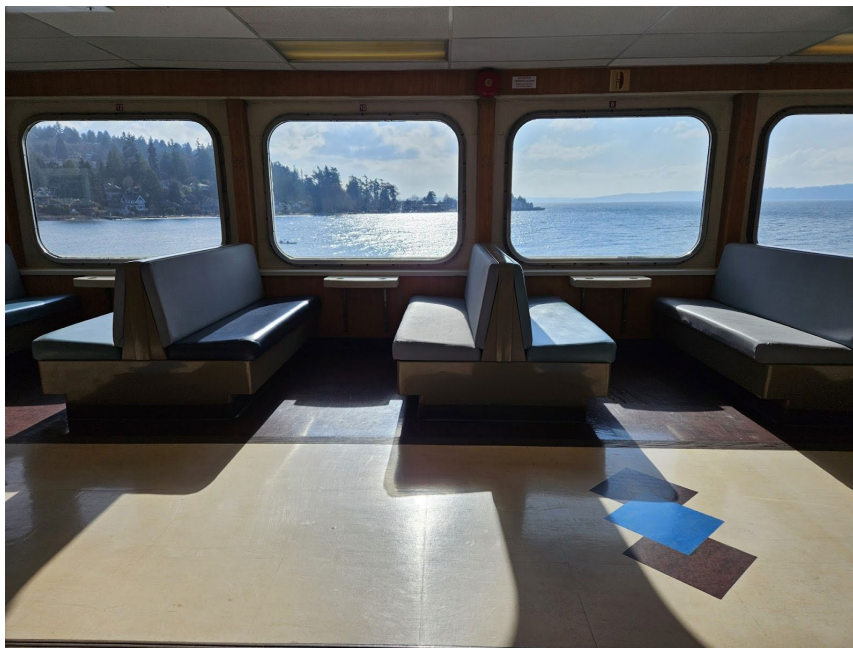


*Fig. 15. "There's no seats as comfortable and I think that's really great. And I did also include in my caption some suspicions of why they make them less comfortable...I think that they do not want to encourage people sleeping" (P6, Line 108-111)*

Additionally, seating arrangements on the ferry play a role in shaping dynamics of inclusion and exclusion. One participant noted disparities in seating comfort between ferries.<sup>5</sup> They believed it was to “[discourage] people sleeping” while also making their favorite ferry – the Tillikum – a “more special and like a homey, comfortable ferry” to them (P6, Line 108-111). This illustrates while such design choices may effectively deter vulnerable or homeless populations from using them, they create consequences for other riders who recognize what is going on and raises questions about equity and accessibility for all passengers.

### Relics of Time

A recurring theme among photovoice participants was nostalgia for the older designs of the ferries. This was juxtaposed with the pain points that inherently come with the outdated features of vessels that were created 50 years ago. The memories and nostalgia when riding the ferries is summarized perfectly by one participant explaining “it's like this warm feeling of...stepping back into a sepia tone photo from, like, my parents or grandparents photo album” (P1, Line 68-69). This feeling was also emphasized by consistent preference of older ferries over the newer ones by many participants (P3, Line 196-199).



*Fig. 16. "It's like this warm feeling of, like, stepping back into a sepia tone photo from, like, my parents or grandparents photo album" (P1, Line 68-69)*

However, participants also recognized the drawbacks of older ferry designs, particularly in terms of accessibility and functionality by modern standards. When describing an old faucet that was not intuitive to use in the Tillikum’s bathroom, one participant explained “it’s just sort of...the weird sort of quirky and sometimes unpleasant design fixtures sort of point to how these are all very old boats” (P6, Line 241-242). Similarly, another participant remarked on the

incongruity of “a wheelchair button...in the middle of a very long staircase...no one in a wheelchair is using that button” (P3, Line 26-29). Their observation emphasizes the disconnect between historical design elements and contemporary accessibility standards.

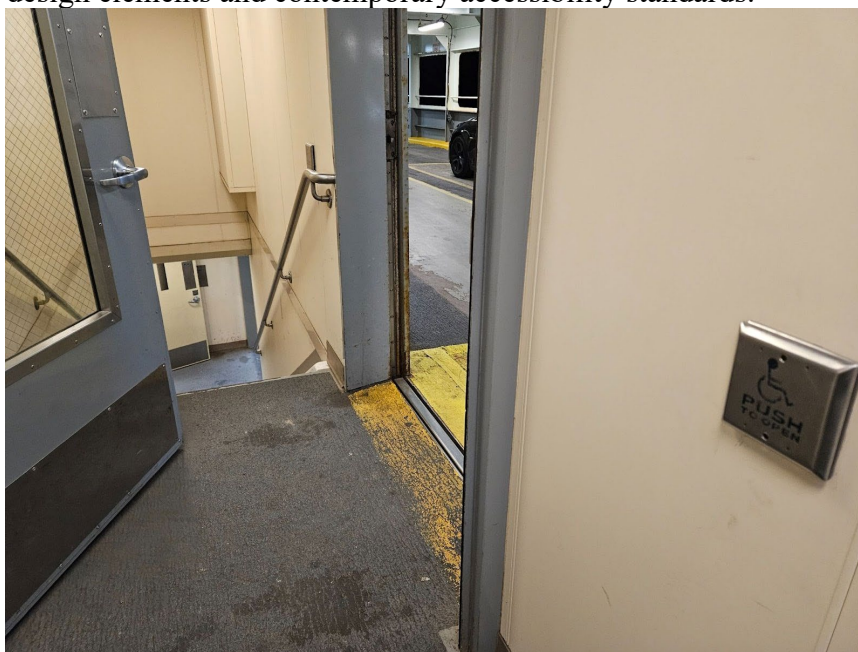


Fig. 17. "I carry a lot of stuff. And so it's really nice...It cracks me up because it does have a wheelchair button and it's in the middle of a very long staircase" (P3, Line 25-28)

Old systems – like the ferries – which are steeped in history can continue to serve systems of oppression if changes are not made. The idea of accessibility is new; the Americans with Disabilities Act was passed in 1990 which is 30 years after the Tillikum was made (ADA National Network n.d.). It is important to critically assess the design of ferries through accessibility and social justice lenses to understand what populations might be negatively affected. For example, the current use of technology through digital screens to display closed captioning for announcements is an effective implementation of accessibility on the ferry (P8, Line 231-232).

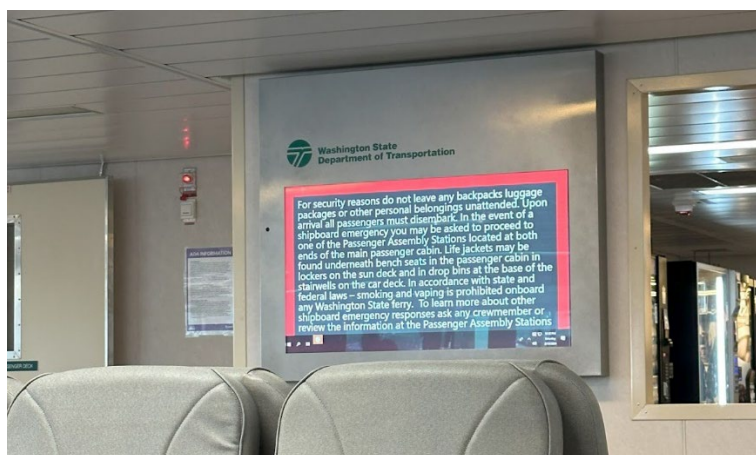
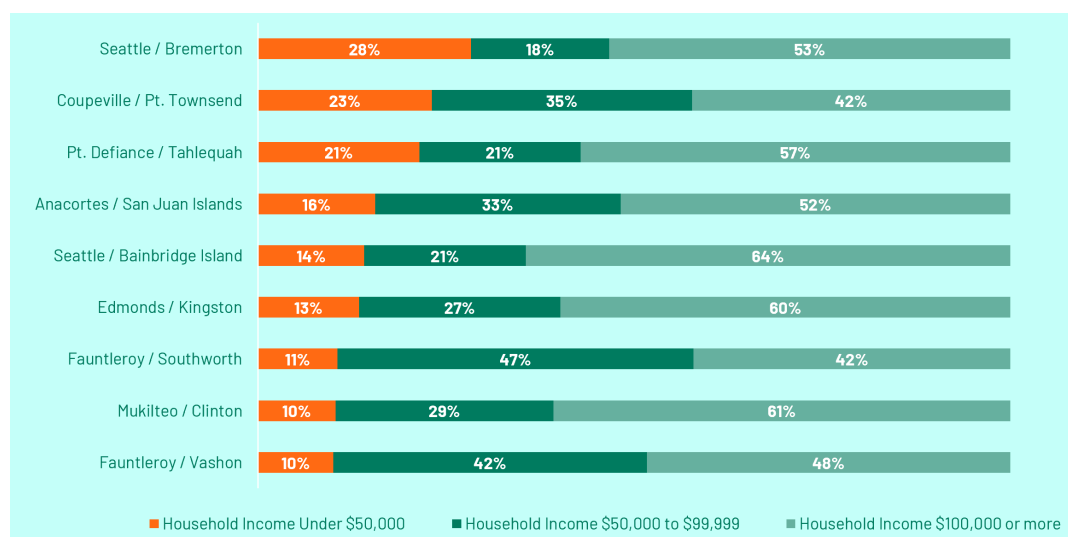


Fig. 18. "I didn't realize they actually had screens that displayed [the onboarding and offboarding message]...I think it's both kind of a cool, nostalgic thing for me and also like definitely helps with the accessibility" (P8, Line 226-228)

Participants also highlighted socioeconomic disparities in the ferry system, particularly regarding the allocation of resources across different ferry routes. One participant consistently witnessed on the Bremerton route the family bathroom was consistently closed, the water fountains were not good quality, and they were down to one ferry because it was moved to serve the Bainbridge route (P4, Line 147-149, 185-188, 321-322). Another participant who was a Lopez resident noted they felt Friday Harbor had residents with “money and influence” and “the boat automatically gets adjusted for them” (P10, Line 112-114).

What is valuable to note about the Bremerton route is that in survey data, it had the greatest percentage of respondents with a household income lower than \$50,000 and the greatest percentage of racially diverse respondents. Therefore, it is important to consider if the treatment of routes is based on historical precedence and where that precedence came from. Prioritizing routes that serve lower income, more racially diverse riders are imperative to create a more equitable rider experience for all and work against historical systems of oppression. This is especially important when the assumed identity of commuters and ferry riders is often white, older, and higher income.



*Fig. 19. Household income percentage broken down by each ferry route.*

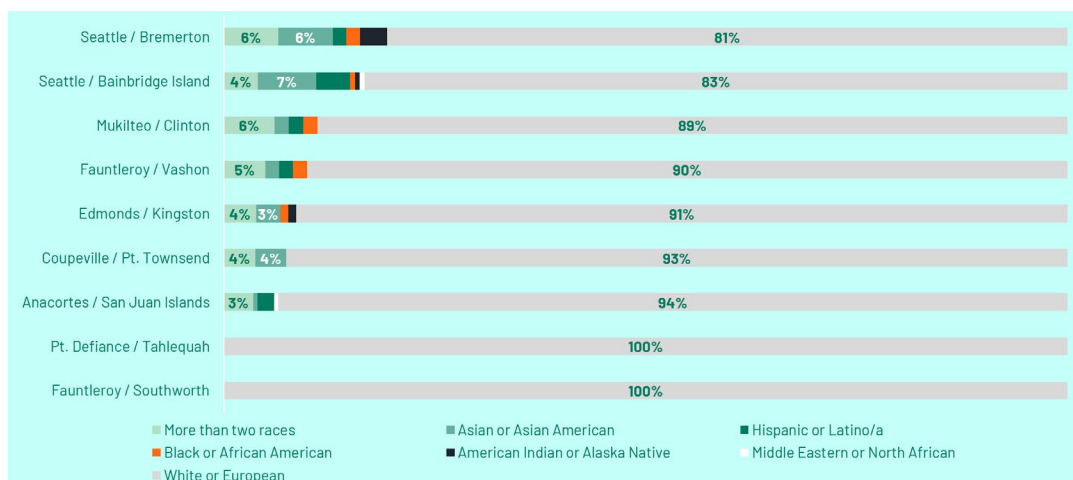
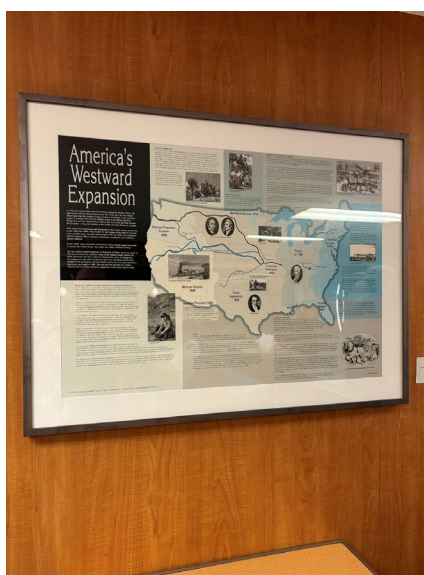


Fig. 20. Race percentage broken down by each ferry route.

### Technology & Information

Despite being commuters, photovoice participants expressed a desire for more interactivity and engagement during their ferry rides. Field observations revealed passengers pausing to examine informational materials like photos and maps, indicating the effectiveness and interest in the content (Obs. 4, Line 16-17).

Participants gave an even deeper look into what riders might be more interested in, such as Puget Sound history and wildlife. One explained how wildlife posters or plaques were a great learning opportunity to engage children, and how the location of current wildlife posters up high with small print might not be ideal for the best target audience (P1, Line 101-105). In relation to the previous relics of time theme while more intensely considering equity and social justice, another participant critiqued a historical poster, posing the question: “Why are we still talking about Lewis and Clark in 2024?”. They suggested it was a great opportunity to instead elevate indigenous peoples’ history instead (P11, Line 136-139).



*Fig. 21. "It could be a really cool opportunity to share out some information about...the indigenous peoples that have lived and live like in the Salish Sea and surrounding areas...why are we still talking about Lewis and Clark in 2024?" (P11, Line 136-139)*

Participants also expressed curiosity about information surrounding the ferry itself. One participant explained their fascination with seeing “more about how the ferry works” like the engine room and operational logistics (P9, Line 199). Another participant who goes to school in eastern Washington tracks the ferries using the WSDOT app and noted “sometimes when [they are] bored...even at school, [they will] see what ferries are on the route” (P8, Line 179-180). The desire for more information and interactive experiences to educate passengers about ferry systems and operations – like displaying real-time ferry tracking on screens – could be enjoyable for children and adults alike (P4, Line 200-201).

While the two previous themes were focused on educational information, other participants were interested in community and public health information to replace tourism brochures as well as incorporating them into the digital screen displays. A participant described they “would love to know what events are going on in Bremerton or what more events in Seattle” (P4, Line 223). This relates back to the theme of commuter identity and how they differentiate themselves from tourists. Ferries are an extension of their community for commuters, which means they are an effective and valuable way to disseminate community or public health information. One participant sums it up best: “If we can get tourist information there, why wouldn’t we have a section that helps people live their best life?” (P2, Line 245-246).



*Fig. 22. "You have a great chance to maybe put something there that children can learn about the ferry system. That's digital, right? And then I just think all of the paper that's there, a lot of times people take it. Waste it" (P4, Line 200-202)*

## Conclusion

### Reflection

This study underscores the significance of ferry commuting as a central aspect of identity and community for participants. Through photovoice narratives and observational data, it became evident that ferry riders view their daily commute not merely as a means of transportation but as an integral part of their lifestyle and sense of belonging. This sentiment was further amplified by the strong bonds and interactions fostered among commuters during their ferry journeys, highlighting the emergence of a distinct commuter identity and a sense of community onboard.

The study shed light on the nuanced challenges and disparities within the ferry system, ranging from access to food to concerns about safety and inclusivity. Participants articulated the need for equitable access to resources and services across different ferry routes, emphasizing the importance of considering social justice and equity in ferry design and policy decisions.

Participants also expressed a desire for more interactive and engaging experiences onboard, particularly in terms of educational content and community information. Integrating technology and providing relevant information can enhance the commuter experience and foster a greater sense of connection to the ferry community.

In light of these findings, it is imperative for ferry operators and policymakers to prioritize the needs and experiences of riders, ensuring the ferry system remains inclusive, accessible, and responsive to their diverse needs. By addressing the identified challenges and leveraging opportunities for improvement, the ferry system can continue to serve as a vital lifeline for island communities while fostering a sense of belonging and community among its passengers.

### Next Steps

Building upon the insights gained from this study, several recommendations can be made for future research and action:

- **Equity and Accessibility:** Conduct further research to assess the impact of ferry system design and policies on marginalized communities, with a focus on promoting equity and accessibility for all passengers. This may involve conducting targeted surveys and interviews with underserved populations to better understand their needs and experiences.
- **Community Engagement:** Explore innovative approaches to enhance community engagement onboard ferries, such as interactive exhibits, digital displays, and community-focused events. Collaborate with local organizations and stakeholders to develop and implement initiatives that promote community building and social connection among passengers.
- **Technology Integration:** Explore opportunities to leverage technology to improve the commuter experience and provide valuable information to passengers. This could include the real-time ferry tracking, interactive maps, and multimedia educational content.
- **Terminal Design and Amenities:** Advocate for improvements in ferry terminal design and amenities to better serve the needs of commuters and island residents. This may involve collaborating with urban planners, architects, and policymakers to design terminals that are welcoming, accessible, and equipped with essential services such as food options and community spaces.

By taking proactive steps to address the identified challenges and capitalize on opportunities for improvement, ferry operators and policymakers can create a more inclusive, engaging,

and sustainable ferry system that meets the needs of all passengers and fosters a strong sense of community onboard.

### **Acknowledgements**

I would like to thank my mentor, Keith Harris, who has helped me navigate each milestone of my senior project since the very beginning. Michelle Abunaja and Christopher Campbell were there to provide advice as CEP faculty. When I had project planning questions, my supervisor Hillary Winchester was available. Additionally, Mark Zachary and Kate Starbird from the HCDE department gave me valuable user experience perspectives.

When initially planning this project and conducting field observations, John Venzina from the Washington State Ferries was an integral help. Chelsea Benning, Bill Young, Aaron Halbert, and Carl See from Washington State Transportation Commission were vital in my ability to advertise my survey to F.R.O.G. participants.

Everyone's interest and openness to my project was a key part of my success! Thank you all so much.

## Appendix A: Survey Questions

### Washington State Ferries: The Rider Experience

Hello! My name is Mia Oscarsson, I am an undergraduate urban planning student at the University of Washington. I am conducting a senior project focused on **researching the experience of riding the Washington State Ferries**, which is a historically significant space and a part of Seattle's unique identity as a city.

I am interested in **what your personal experience is**. This survey will ask questions about your individual experience of your **most recent ferry ride**.

This survey will also ask if you are interested in participating in more creative, interesting research methods like **taking photos** or being **interviewed**.

This survey should take about 5 minutes to complete. Data collected will be confidential. For any further questions, please feel free to contact me at moscar@uw.edu.

Screening Question	
<i>This question determines your eligibility for this survey.</i>	
1	Have you ridden the ferry at least once in the past year?* <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
Section 1: Your Experience on the Ferry	
2	How long have you been riding the Washington State Ferries?* <ul style="list-style-type: none"> <li>• Less than 6 months</li> <li>• 6 to 11 months</li> <li>• 1 to 5 years</li> <li>• 6 to 10 years</li> <li>• Greater than 10 years</li> </ul>
3	What route did you use for your most recent ferry ride?* <ul style="list-style-type: none"> <li>• Anacortes / San Juan Islands</li> <li>• Coupeville / Pt. Townsend</li> <li>• Mukilteo / Clinton</li> <li>• Edmonds / Kingston</li> <li>• Seattle / Bainbridge Island</li> <li>• Seattle / Bremerton</li> <li>• Fauntleroy / Vashon</li> <li>• Fauntleroy / Southworth</li> <li>• Southworth / Vashon</li> <li>• Pt. Defiance / Tahlequah</li> <li>• San Juan Interisland</li> </ul>
4	What was the destination of your most recent ferry ride?* <i>Select the terminal you were arriving at.</i>
5	At what time was your most recent ferry ride?* <ul style="list-style-type: none"> <li>• Morning (5am to 12pm (noon))</li> <li>• Afternoon (12pm to 5pm)</li> </ul>

	<ul style="list-style-type: none"> <li>• Evening (5pm to 9pm)</li> <li>• Night (9pm to 5am)</li> </ul>
6	<p>What is the primary purpose of your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• Family/friends</li> <li>• Recreation</li> <li>• Work commute</li> <li>• Work related</li> <li>• School commute</li> <li>• Shopping</li> <li>• Medical appointment</li> <li>• Special events</li> <li>• Personal</li> <li>• Other</li> </ul>
7	<p>Would you like to elaborate on the primary purpose of your most recent ferry ride?</p>
8	<p>How did you board the ferry for your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• Walk-on</li> <li>• Car</li> <li>• Bus</li> <li>• Bike</li> <li>• Motorcycle</li> <li>• Other</li> </ul>
9	<p>Did you ever leave your car during your most recent ferry ride?*</p> <ul style="list-style-type: none"> <li>• I left my car during my ferry ride</li> <li>• I stayed in my car during my ferry ride</li> <li>• Other</li> </ul>
10	<p>During your most recent ferry ride, what did you do once you finished boarding the ferry?*</p> <p><i>For example: I walk all the way from where I entered the ferry to the opposite end and take a seat in that area so I can get off the ferry quickly once it arrives.</i></p>
11	<p>During your most recent ferry ride, what activities did you spend the majority of your time on the ferry doing?*</p> <p><i>Check all that apply.</i></p> <ul style="list-style-type: none"> <li>• Work</li> <li>• Walking</li> <li>• Sleeping</li> <li>• Reading</li> <li>• Listening to music/Watching a movie</li> <li>• Using phone</li> <li>• Playing games/Doing puzzles</li> <li>• Exploring the ferry</li> <li>• Making conversation</li> <li>• Nothing</li> <li>• Other</li> </ul>
12	<p>Would you like to elaborate on any of the activities you did during your most recent ferry ride?</p>
Section 2: Optional Demographics	

<i>The following are demographic questions so that I may have a better understanding of the background and diversity of my participants! These questions are all <b>optional</b>. Please do not answer anything you feel uncomfortable sharing.</i>	
13	What is your age? <ul style="list-style-type: none"> <li>• Under 18 years</li> <li>• 18 to 24 years</li> <li>• 25 to 34 years</li> <li>• 35 to 44 years</li> <li>• 45 to 54 years</li> <li>• 55 to 64 years</li> <li>• 65 years or over</li> </ul>
14	What is your gender? <ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> <li>• Nonbinary</li> <li>• Self-identify</li> </ul>
15	Please select one of the following that best describes your average household income. <ul style="list-style-type: none"> <li>• Under \$35,000</li> <li>• \$35,000 to \$49,999</li> <li>• \$50,000 to \$74,999</li> <li>• \$75,000 to \$99,999</li> <li>• \$100,000 to \$149,999</li> <li>• 150,000 or more</li> </ul>
16	Please select one of the following that best describes your racial or ethnic identity. <ul style="list-style-type: none"> <li>• American Indian or Alaska Native</li> <li>• Asian or Asian American</li> <li>• Black or African American</li> <li>• Hispanic or Latino/a</li> <li>• Middle Eastern or North African</li> <li>• Native Hawai'ian or Pacific Islander</li> <li>• White or European</li> <li>• More than two races</li> <li>• Self-identify</li> </ul>
Section 3: Further Research	
17	Would you be interested in participating in further research related to the experience of ferry riders?* <i>This might entail being prompted to take photos of a future ferry ride or participating in interviews. You get to decide!</i>
18	First and Last Name* <i>You selected yes to being interested in participating in further research. Please provide your name.</i>
19	Email* <i>You selected yes to being interested in participating in further research. Please provide your email as a method of contact.</i>

20	<p>I am conducting a <b>photovoice study</b> – which allows participants to <b>tell the story of their own ferry experience through photographs</b>. I would provide prompts to guide the topics of your photos. Would you be interested in participating in this more creative method of research?*</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
21	<p>I am conducting <b>interviews</b> on the experience of ferry riders, including <b>past memories</b> you might have. Would you be interested in participating in this more in-depth method of research?*</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
22	<p>You selected yes to being interested in participating in interviews. Where would you be comfortable doing interviews?*</p> <ul style="list-style-type: none"> <li>• Zoom/video call</li> <li>• Phone call</li> <li>• In-person</li> </ul>

Thank you for filling out my survey! Please share it with anyone that you know who might be interested or has recently rode the ferry using this link: <https://forms.office.com/r/VFqvKuzQmc>

If you responded that you were interested in participating in further research, I will contact you through email promptly!

## **Appendix B: Survey Recruitment Materials**

### Recruiting Template

Hello! My name is Mia Oscarsson, I am an undergraduate urban planning student at the University of Washington majoring in Community, Environment, & Planning. I am conducting a senior project focused on **researching the experience of riding the Washington State Ferries**, which is a historically significant space and a part of Seattle's iconography. This work is valuable in capturing the perspective of riders, the unique public transit experience of ferries, and the historical significance of older ferries as change is on the horizon with ferry fleet turnover and future electrification goals.

If you are interested in participating in research like being prompted to take photos of your ferry ride or being interviewed about your experience as a ferry rider, please fill out this recruitment survey! For any other questions, feel free to contact me at [moscar@uw.edu](mailto:moscar@uw.edu).

### Poster



CEP SENIOR PROJECT | MIA OSCARSSON | MOSCAR@UW.EDU

PUBLIC TRANSIT EXPERIENCE STUDY

Are you a Washington  
State Ferry rider?

FILL OUT THIS SURVEY TO SHARE YOUR  
EXPERIENCE!

[bit.ly/WSF-Experience](https://bit.ly/WSF-Experience)



Instagram Post

CEP SENIOR PROJECT | MIA OSCARSSON | MOSCAR@UW.EDU



PUBLIC TRANSIT EXPERIENCE STUDY

Are you a Washington State Ferry rider?

FILL OUT THIS SURVEY TO SHARE YOUR EXPERIENCE!

[bit.ly/WSF-Experience](https://bit.ly/WSF-Experience)



**Appendix C: Field Observation Notetaking Template**

Field Observation #X

Route:

Ferry:

Time:

Date:

**Information and Communication Access**

- **What is the flow of traffic through the space?**
  - Note
- **Was it designed that way?**
  - Note
- **What is traveling through the space?**
  - Note
- **Where do people linger?**
  - Note

**Possessions**

- **What are people carrying with them?**
  - Note
- **What do they do with them?**
  - Note
- **What are people acquiring?**
  - Note

**Media Consumption**

- **What are people reading, watching, listening to?**
  - Note
- **Did they bring it or buy it?**
  - Note
- **Where do they consume the media?**
  - Note

**Demographics**

- **What are the age ranges of people on the ferry?**
  - Note
- **Are people in groups or separated?**
  - Note
- **How are people interacting with each other?**
  - Note






**Built Environment**


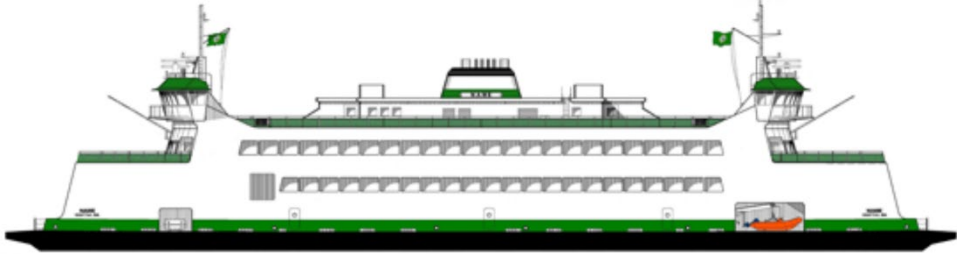
- **Which ferry are you on?**
  - Note
- **How is the space laid out?**
  - Note

- **What does it look like?**
  - Note
- **Is there a theme?**
  - Note

**Layout of the Ferry**

*Print out the following diagrams to take notes on.*

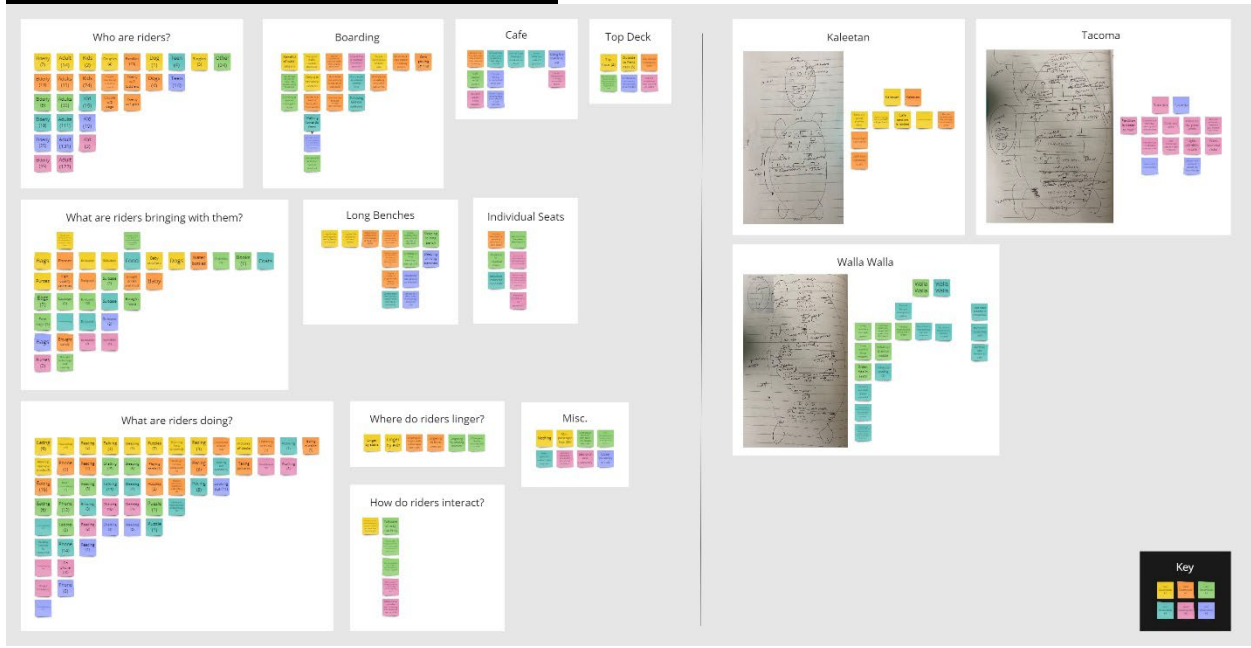
<p>Jumbo Mark II</p> 	<p>Puyallup Tacoma Wenatchee</p>
<p>Jumbo</p> 	<p>Spokane Walla Walla</p>
<p>Super</p> 	<p>Kaleetan Yakima</p>
<p>Olympic</p> 	<p>Chimacum Samish Suquamish Tokitae</p>
<p>Issaquah</p> 	<p>Cathlamet Chelan Issaquah Kitsap Kittitas Sealth</p>
<p>Evergreen State</p>	<p>Tillikum</p>

	
<p>Kwa-di Tabil</p> 	<p>Chetzemoka</p> <p>Kennewick</p> <p>Salish</p>

### Overall Experience

- **What was the overall ride like?**
  - Note
- **What is the first and last thing I noticed?**
  - Note
- **How is it different or similar to other ferry rides you observed?**
  - Note

## Appendix D: Field Observation Analysis



View full Miro [here](#).

## **Appendix E: Email Templates**

### **Introduction Email**

Subject: Washington State Ferries: The Rider Experience Photovoice + Interviews

Hi **Example Participant**,

This is Mia Oscarsson, thank you so much for taking my survey about your ferry riding experience! As a refresher, I am an undergraduate urban planning student at the University of Washington. I am conducting a senior project focused on researching the experience of riding the Washington State Ferries, which is a historically significant space and a part of Seattle's unique identity as a city.

In my survey, you expressed interest in **participating in the photovoice study and interviews**. My goal through this research is to focus on riders that rely on the ferry often, and I purposefully picked a diverse group of riders from all ferry routes. In this email, I will outline what my asks are of you as a participant and give you materials to fill out.

*During your next ferry ride, please take photos following these three prompts using your personal cell phone:*

- *Take 3 photos of things that you **liked** about your ferry ride*
- *Take 3 photos of things that you **disliked** about your ferry ride*
- *Take 2 photos of things that you would **like to see more** of during your ferry ride*

*Afterwards, please upload your photos to **this Google Doc** ([hyperlink](#)) or email them to me with labels. Here are [instructions](#) on how to upload photos to Google Documents on both desktop and phone app if you have never done this before.*

The purpose of this is to allow participants to **tell the story of their own ferry experience through photographs**. Be creative, honest to your experience, and have fun!

Once you have completed the photovoice study, I will send a follow up email about how to sign up for an interview with me. In the interview, we will talk about the purpose behind your photos as well as your past ferry experiences.

All data collected will be anonymized and I will ask consent to include any photos in my final report or video.

I'm grateful for your interest in my work and I would love to introduce myself or answer any questions you might have! Depending on your preference, we can set up a short video or phone call just to meet or I can answer your questions directly through email.

**Please respond to this email with the following:**

- **Introduce yourself! Who are you and what interested you in my research? :)**
- **Please let me know if you do not have a device you can take digital photos with.**
- **Would you like to share your photos on a Google Doc or by email?**

- **Would you like a short call for introductions?**
- **Any other questions you might have.**

I look forward to collaborating with you!

Thank you,  
Mia Oscarsson

#### Reminder Email

Hi **Example Participant**,

Just bumping this email up in your inbox! This is Mia Oscarsson, thank you so much for taking my survey about your ferry riding experience! As a refresher, I am an undergraduate urban planning student at the University of Washington. I am conducting a senior project focused on researching the experience of riding the Washington State Ferries, which is a historically significant space and a part of Seattle's unique identity as a city.

In my survey, you expressed interest in participating in the **photovoice study and interviews**. Please refer to my previous email for a detailed outline of what this might look like and **reply to this email if you are still interested in participating!**

I look forward to hearing from you!

Thank you,  
Mia Oscarsson

#### Interview Email

Hi **Example Participant**,

This is Mia Oscarsson, thank you so much for completing the photovoice study!

In my survey, you also expressed interest in **participating in an interview**. You may choose to have it conducted over phone call, video call, or in-person at the University of Washington, Seattle campus. Please select a 30-minute time slot using my [Calendly](#) to reserve a time with me.


I am excited to meet you and learn more about your photos! **Please respond to this email if you have any questions.**

Thank you,  
Mia Oscarsson

**Appendix F: Photo Collection Template**

Upload Your Photos Here

Take 3 photos of things that you liked about your ferry ride:

<i>Example</i>	
Photo #1	
Photo #2	
Photo #3	

Take 3 photos of things that you disliked about your ferry ride:

Photo #1	
Photo #2	
Photo #3	

Take 2 photos of things that you would like to see more of during your ferry ride:

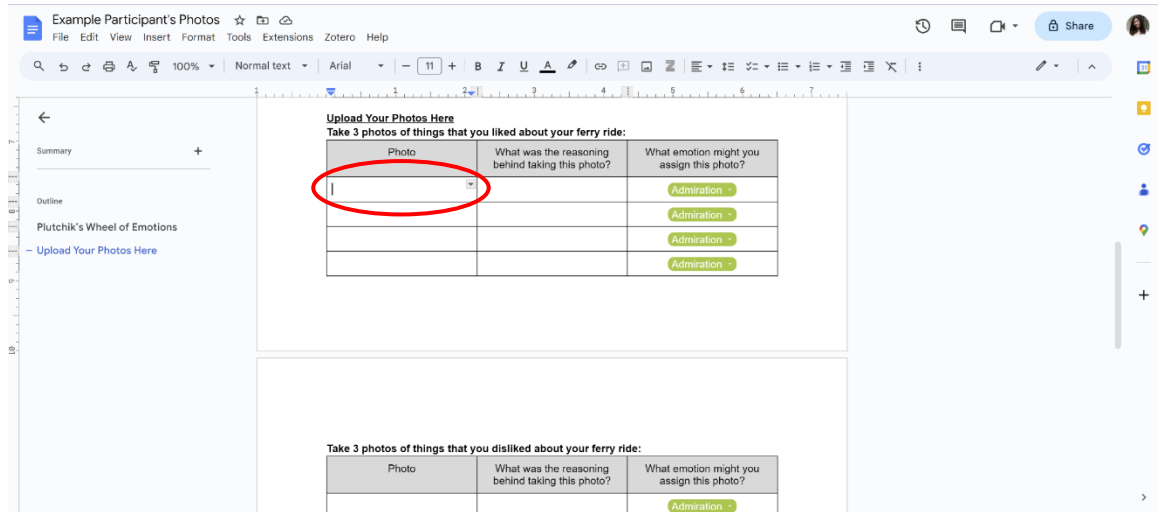
Photo #1	
Photo #2	

## Appendix G: Uploading Instructions

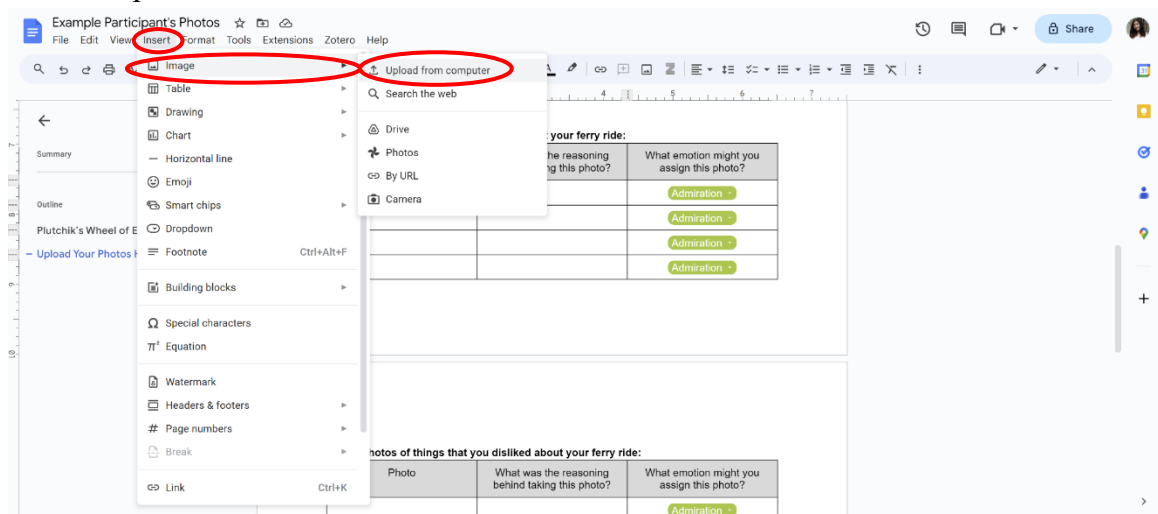
### Desktop

Before you do this, ensure that the photos you would like to upload to the document are downloaded and accessible on your computer.

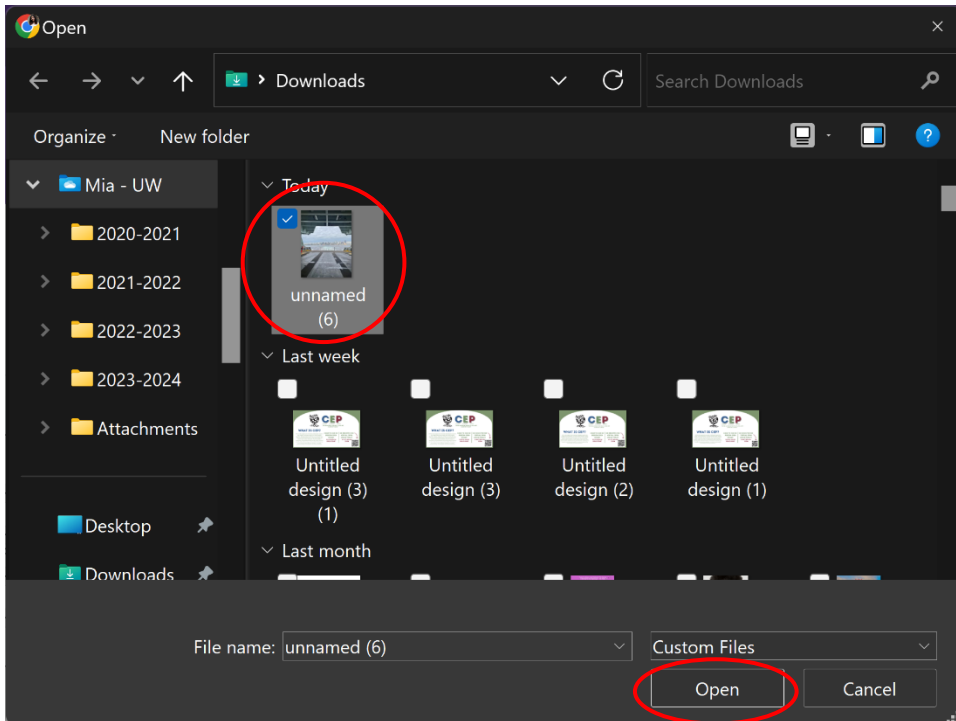
1. Ensure that your cursor is in the correct section of the table where you would like the photo to be placed in the document.



2. Go up to the main menu, select "Insert", hover over "Image", and then select "Upload from computer".




3. Select the correct photo from your File Explorer.



4. The photo should be uploaded!

The screenshot shows a web application interface for uploading photos. The top navigation bar includes 'Example Participant's Photos', 'File Edit View Insert Format Tools Extensions Zotero Help', and a 'Share' button. The main content area features a table with three columns: 'Photo', 'What was the reasoning behind taking this photo?', and 'What emotion might you assign this photo?'. The first row shows a photo of a ferry deck (circled in red) with the emotion 'Admiration' assigned. Below this, there are two more rows with the same emotion assigned. A section titled 'Take 3 photos of things that you disliked about your ferry ride:' follows, with a table structure similar to the one above, showing a photo and the emotion 'Admiration' assigned.

Photo	What was the reasoning behind taking this photo?	What emotion might you assign this photo?
		Admiration
		Admiration
		Admiration

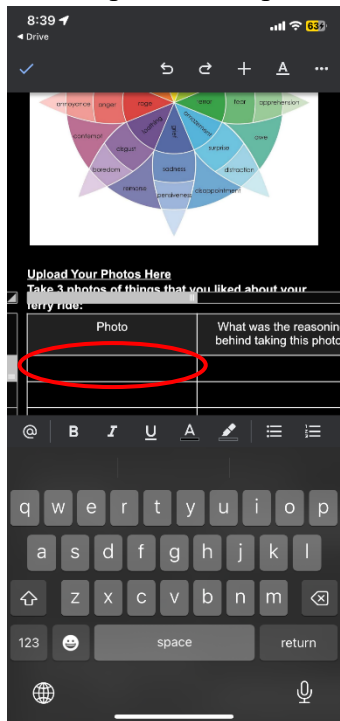
Take 3 photos of things that you disliked about your ferry ride:

Photo	What was the reasoning behind taking this photo?	What emotion might you assign this photo?
		Admiration

## Phone

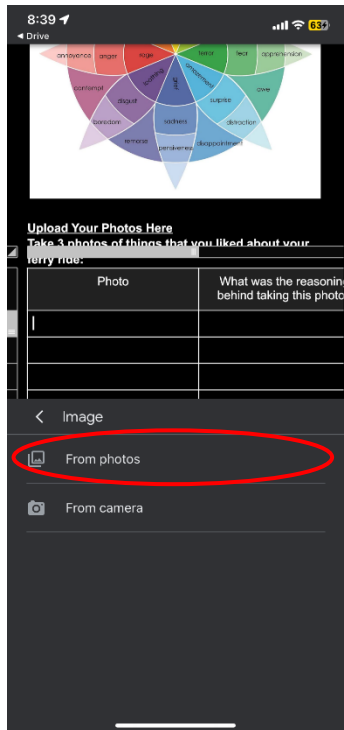
Before you do this, ensure that the Google Docs app is downloaded onto your phone and you can access your email with the link to your Google Doc on your phone.

1. To enter into editing mode, double tap the correct section of the table where you would like the photo to be placed in the document.

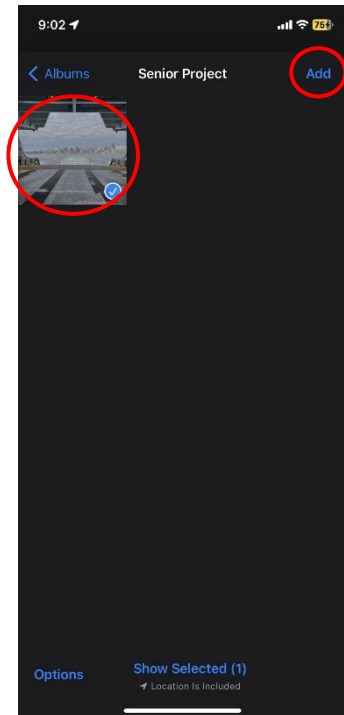


2. Select the "+" in the upper right hand corner of your phone screen. You may have to scroll up the document for this menu to appear.

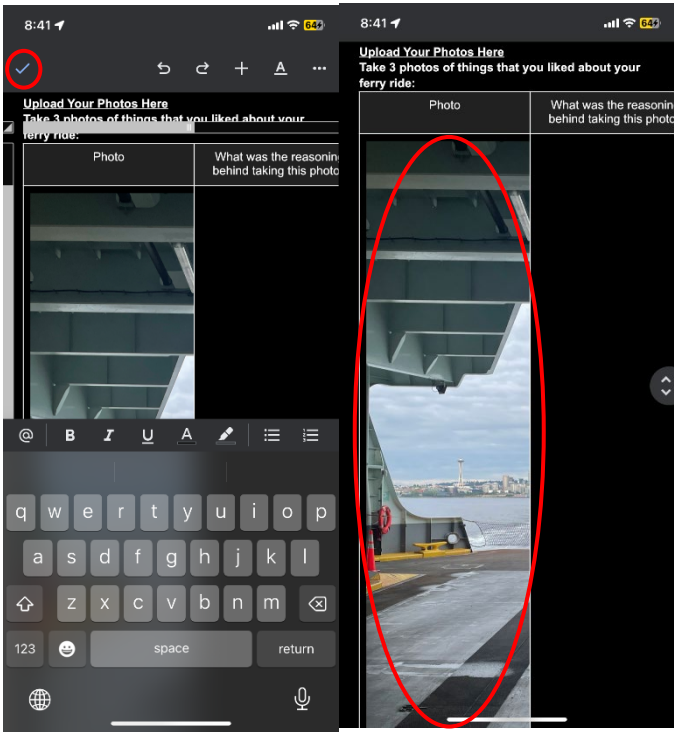




5. After selecting the correct photo, hit “Add” in the upper right hand corner.



6. The photo should be uploaded! Don't worry if sections of the photo look cut off. Select the check mark in the upper left corner to exit out of editing mode.



## **Appendix H: Interview Script and Questions**

Before asking any questions, do the following:

- Ask them how they are doing
- Thank them for doing my photovoice
- Provide context of my project
- Ask for consent about using photos in report, reiterating that they will be confidential
- Ask for consent about recording interview for data collection purposes, reiterating that discussion will be confidential
- Ask if they have any questions

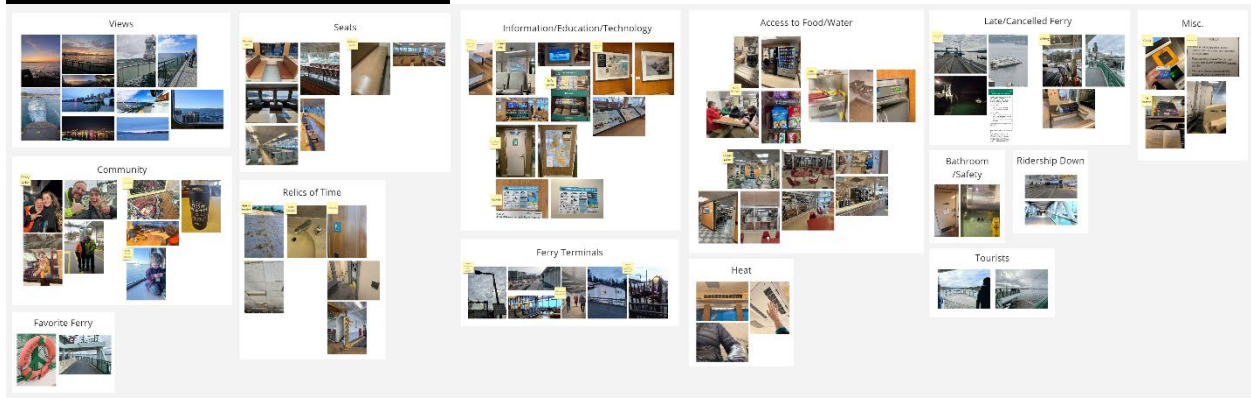
### Questions

1. Why do you ride the ferry?
2. For each photo:
  - a. What was the reasoning behind taking this photo?
3. Do you have any memorable experiences from your time riding the ferry?

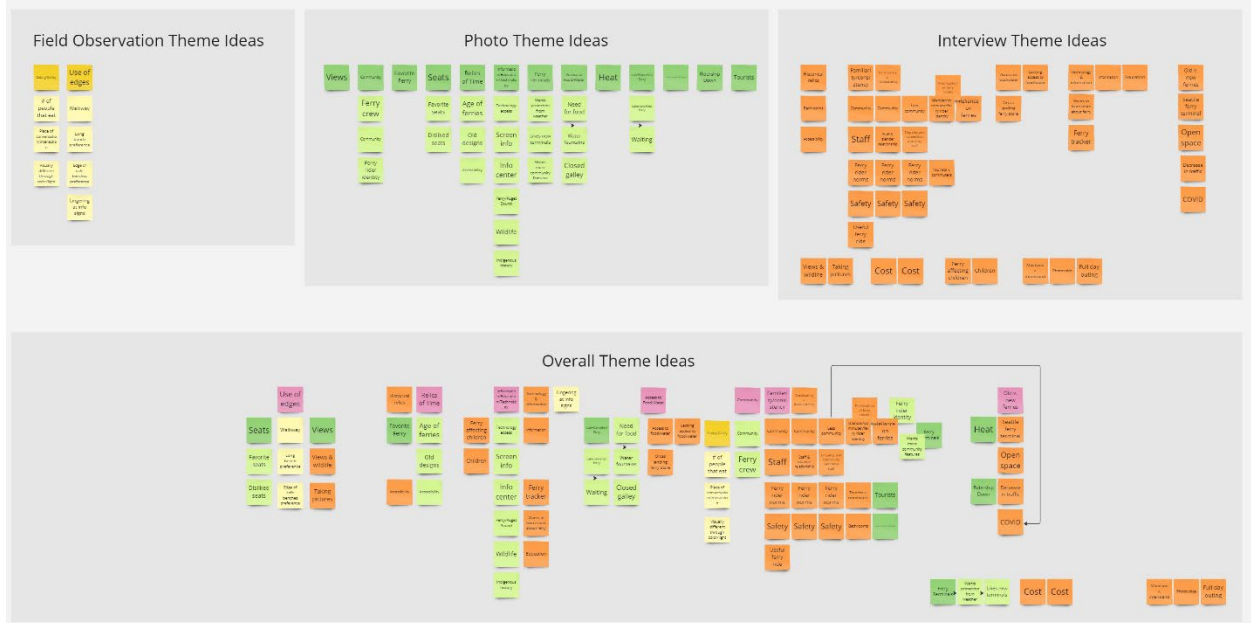
### Follow-Up Questions

1. Why do you ride the ferry?
  - a. Where is your typical destination once you get off the ferry?
  - b. How often do you ride the ferry?
2. For each photo:
  - a. What was the reasoning behind taking this photo?
    - i. What was your mood during the photo?
    - ii. Why did you pick it to answer \_\_\_ prompt?
3. Do you have any memorable experiences from your time riding the ferry?
  - a. Why is it memorable?
  - b. When was this?
  - c. Has something similar happened since?
  - d. If they say none, then as: Can you remember one of the earliest times that you rode the ferry? Walk me through it.
    - i. How old were you?
    - ii. Which ferry route were you taking?
    - iii. What was the weather like?
    - iv. What was your mood that day?
    - v. What did you do on the ferry?

### Appendix I: Photovoice Analysis



View full Miro [here](#).



View full Miro [here](#).

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