

Micro-Commuter Safety Report and Recommendations

Malik Callaham, Krish Guru, Patrice Shumate, Owen Turnbull, Sravya Veldurthi

College of Information Studies, University of Maryland

The University of Maryland - Department of Transportation Services

April 2023

Under the Supervision of: TJ Rainsford



PALS - Partnership for Action Learning in Sustainability
An initiative of the National Center for Smart Growth

Gerrit Knaap, NCSG Executive Director
Kimberly Fisher, PALS Director

Contents

Introduction

Methodology and Participant Profile

 Instrument Development

 Site, Participant Selection, and Focus Groups

 Challenges

Findings

 Demographic Summary

 Focus Group Discussion

Recommendations

Conclusion

Introduction

This report by the iSchool iConsultancy Qualitative Marketing Impact Assessment team was completed in partnership with the University of Maryland Department of Transportation (UM-DOTS). Our specific clients are Marta Woldu, Assistant Director of Sustainability, and Emily Hunter Cosci, Assistant Director for Marketing and Communications. UM-DOTS is in College Park, Maryland, and is responsible for ensuring safe, reliable, and sustainable transportation services to the College Park community.

Recently, they launched a safety awareness campaign focused on informing and understanding the demographics, behaviors, and safety habits of students, staff, and faculty who use the micro-commuting options available on campus. This safety effort is particularly important as there has been a rise in micro-commuter-related accidents on and off campus, and UM-DOTS would like to know the factors that are contributing to that increase.

This report's goal is to provide the UM-DOTS with qualitative data and information regarding rider behavior from micro-mobility users and to provide recommendations where possible that contribute to a safer environment for transportation in the College Park community.

Methodology and Participant Profile

Instrument Development

Based on UM-DOTS goals, scope, and vision, and the available time and resources, the team determined that focus group interviews would be the most efficient way to reach micro-commuters. The team also determined that affinity mapping as a qualitative visualization aid would best display the collected data. The team chose Google Jamboard, an interactive and collaborative whiteboard, to represent its findings.

Site, Participant Selection, and Focus Groups

Focus group interviews were conducted and recorded in-person or virtually throughout the weekday and on weekends and consisted of participants who identified as undergraduate/graduate students, faculty, and/or University staff. Most interviews were at least three to twelve minutes long, and were recorded and transcribed on Zoom, Microsoft Word Online, and mobile phone recordings (consent was obtained before recording interviews).

A mix of in-person and virtual interviews gave the team enough flexibility to account for transportation constraints. In addition, it was feasible to interview at least three to five participants each to satisfy time constraints and data generation.

We asked nine main questions to focus on participants' micro-commuting experiences on and off campus. To better understand how participants processed information, the team used exploratory methods in questions focused on the what, how, and why of their thinking. We also considered their attitudes to better understand behavioral cues and reactions. This led the possibility of deeper discussions of previously unknown issues or concerns not initially considered.

Challenges

The challenges in this methodology were how to frame questions and finding micro-commuters on campus. Using an iterative approach and our requirements document, we created a table that specified what information was needed and what was out of scope to construct better questions. We reviewed the questions to better understand and remove potential biases and to include more follow-up questions that would engage our participants and gather more data.

To meet the second challenge, the team needed participants who used micro-commuting options on or off campus to ensure their perspectives would meet the project scope. We visited UM-DOTS on-campus events and approached students who were near bike parking spots. We also consulted micro-commuters using the online Slack community, Terps For Bike Lanes, as another way to obtain participants.

Figure 1. Requirements Table

Must Have	Nice To Have	Out of Scope
<ul style="list-style-type: none"> Qualitative Information from Student Focus Groups. 	<ul style="list-style-type: none"> Sample questions for student focus groups. 	<ul style="list-style-type: none"> Students that specifically use their own vehicles (cars) and NOT micro-commuting options.
<ul style="list-style-type: none"> Data showcasing students, staff, & faculty using Micro-commuting options (different focus groups for each). 	<ul style="list-style-type: none"> Differences in virtual vs in-person interviews. 	<ul style="list-style-type: none"> Database management software tools.
<ul style="list-style-type: none"> First-hand interviews of what students think of UM DOTS micro-commute options & the campaign itself. 	<ul style="list-style-type: none"> Micro-commuter-related calendar events on campus. 	<ul style="list-style-type: none"> Creation of surveys Information on who uses Smart Commute.

Findings

Demographic Summary

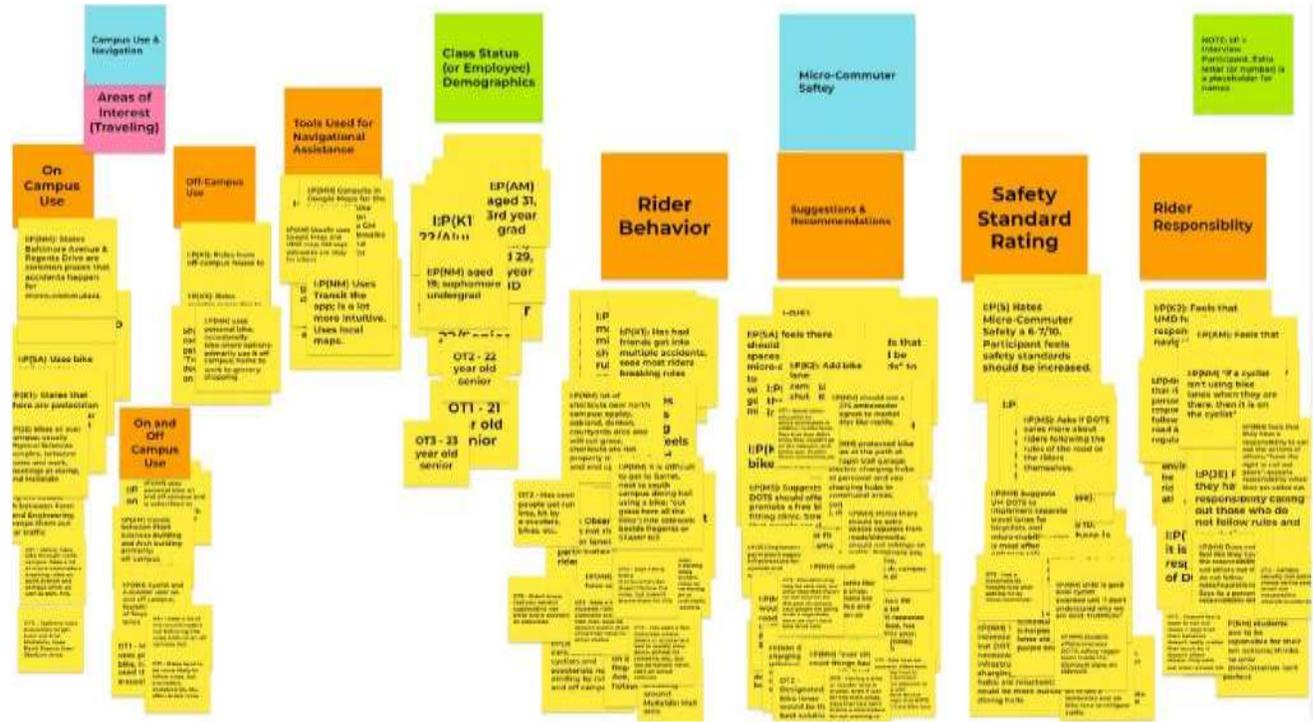
The 16 focus group participants ranged in age from 19 to 37 years old. All participants were affiliated with the University of Maryland as current undergraduate or graduate students, faculty, or staff.

Focus Group Discussion

The topic headings in the Jamboard affinity diagram in Figure 2 are based on interview responses. The two main topic themes are color-coded in blue:

- Campus Use and Navigation is information about where participants liked to travel on and off campus (and their areas of interest).
- Micro-Commuter Safety covers information dealing with riding behavior (or behaviors that were seen on the road/campus), suggestions and recommendations for UM-DOTS from the participant's viewpoints, how participants rate current micro-commuter safety standards, and their opinions on who bears responsibility for rider behaviors.

Figure 2. Jamboard Affinity Diagram



The responses are summarized below and along with overall attitudes.

Topic 1. Campus Use and Navigation (Areas of Interest)

On-Campus Use

Participants who commute on campus are primarily bike and e-scooter riders that tend to travel around McKeldin Library, Regents Drive, Farm Drive, and Engineering Drive. Common areas in which accidents are said to occur are Baltimore Avenue, Regents Drive, and Paint Branch.

Off-Campus Use

Off-campus participants reported using their bikes to travel to the grocery store, McKeldin Library, and to campus from home. One participant uses the “Trolley Trail” as a shortcut.

On and Off Campus Use

Participants who commute on and off campus tend to use both bikes and e-scooters. Common travel routes are to campus, the plant sciences building, and the architecture building. Participants also noted that micro-commuters who use e-scooters and skateboards tend not to follow the campus rules more often.

Tools Used for Navigational Assistance

Most participants’ use Google Maps as their preferred tool to find safe routes or routes with less traffic. Some participants will use the transit map, local maps, or their memory as an alternative.

Topic 2: Micro-Commuter Safety

Rider Behavior

Participants stated that micro-commuters tend not to ride in the proper bike lanes and engage in bad rider practices as a result of not knowing the proper travel lanes, difficulty when traveling to certain areas (such as Garret Hall) because of grass cutting, shortcuts not being marked (or improperly marked), and on-going traffic. The areas considered to be hotspots of bad practices include McKeldin Mall, Regents Drive, and Baltimore Avenue.

Some participants are empathic to micro-commuters who choose to break the rules, stating that riders may decide to ride on sidewalks if paths are obstructed or the amount of traffic is high.

Suggestions and Recommendations

Common recommendations from participants are bike lanes near the areas of Baltimore Avenue, Regents Drive, Stadium Drive, Mall Circle, and Campus Drive; bike rules and regulations education (training modules); incentives for safe travel (such as a Starbucks gift card); better public relations (UM-DOTS ambassador); a bike fitting clinic (to help fit riders and increase their control); and service improvements at bike repair shops and stations (more staff, replacements for broken equipment).

Participants expressed frustration that bike lanes haven't been implemented.

Safety Standard Rating

Participants felt that micro-commuter safety on and off campus should be increased by providing separate travel lanes for micro-commuters that limit interaction amongst travelers and reduces conflict. They also noted the importance of increased awareness of rider policies among micro-commuters and the public.

Participants expressed a great deal of concern about whether micro-commuter safety is a priority, and whether DOTS is more concerned that riders follow road rules rather than keeping riders safe.

Rider Responsibility

Most participants believe responsibility on the road lies with the riders themselves, specifically following the rules of the road, using the correct bike lanes, and calling out reckless behavior. Other participants felt the responsibility was shared among the campus community, DOTS, and campus security.

Some participants were adamant that the university should hold micro-commuters responsible for following rider regulations and should make campus navigation easier to prevent riders from taking riskier alternative routes. Some felt it isn't their responsibility to call out others' actions especially when the micro-commuting travel environment is less than ideal. Still others were indifferent, specifically in that responsibility depends on the person, and if no one is hurt then it isn't anyone's responsibility to say anything.

Recommendations

Based on the findings, the team makes the following recommendations.

- Establish dedicated micro-commuting infrastructure including travel lanes through areas of highly concentrated traffic, ongoing construction, or grass-cutting, as well as those mentioned by participants: Baltimore Avenue, McKeldin Mall, etc.
- Make bike trails more easily identifiable and distinguishable.
- Offer incentives like Starbucks coffee for safe micro-commuter travel.
- Establish educational training modules for micro-commuters.
- Install micro-commuting vehicle charging stations on-campus in areas such as McKeldin Mall, North Campus, Dining Hall, etc.
- Give micro-commuting more presence among the public with public relations via campus events.

Another recommendation is to establish a basic fitting clinic, as suggested by one participant. It would be worthwhile to ensure riders are using bikes that fit them correctly for their size to increase their comfort and their control when traveling. It would promote rider efficiency and possibly decrease rider-related crashes.

Conclusion

The different perspectives and stories gathered from participants identified common concerns, complaints, and recommendations to help improve the micro-commuter experience.

Although the team couldn't determine if the safety awareness campaign was successful, it did obtain information on external factors that lead riders to engage in bad travel practices, as well as what riders think would make campus travel safer and who is responsible for making it safer.

A future qualitative marketing impact assessment should include more information about the safety campaign and use a semi-structured approach to focus group interviews, so participants feel they're having a conversation and not a generalized experience.

We also suggest a blend of in-person and virtual interviews for the richness of the experience and to assess the differences in behavioral cues on certain topics and questions.

For further inquiries about the project feel free to contact our team liaison below: Malik Callaham mcallah4@terpmail.umd.edu

