

Alternative Transportation Survey

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Introduction

As we move closer to our goal of being carbon neutral one of the problems that we will have to tackle is the problem of transportation. This is especially relevant to UCR where, in 2016, 46% of students used a single-occupancy vehicle (SOV) to commute to campus.

As UCR continues to grow, so does the amount of cars that move to and from our campus. This has caused a great deal of dissatisfaction within students and others in the community due to the increase in cars looking for parking while the supply of parking space has not increased at the same rate.

Moreover, due to the fact that only employees were surveyed about their transportation practices very little information was available about students and other members of the community's transportation habits.

Project Goals

Since it is single-occupancy vehicles that cause the greater amount of problems both to students satisfaction, having to find parking and also for the environment, more cars means more emissions, the focus of the survey was to gather information to develop strategies to reduce the number of single-occupancy vehicles.

The other small goal of the project was to simply find out what people's attitudes and opinions are, whether they have tried alternative modes of transportation or not. In this way we can work in improving alternatives which should also lead to more commuters opting for these, rather than using their car.

Lastly, the least important goal was to capture the community's attitudes towards potential programs, such as public transportation workshops, and events.

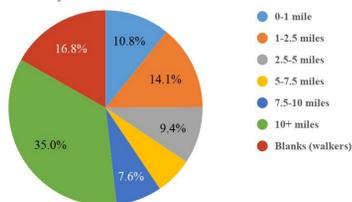
Methods

In order to understand in depth what are the reasons students do, or do not, use alternative modes of transportation, it is important to try to understand what are the circumstances in which students find themselves in. For this reason, the survey was developed to ask questions at the beginning which would allow to breakdown the responses by the more relevant demographics.

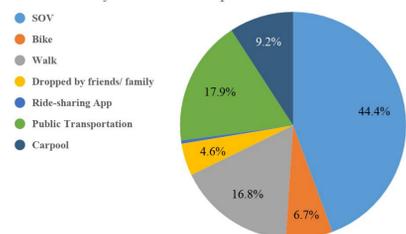
In addition, because another goal was to ask specific questions to different groups of commuters, the survey was designed with advanced branching, meaning that specific answers at the beginning of the survey meant specific question being asked towards the end.

Results and Outcomes

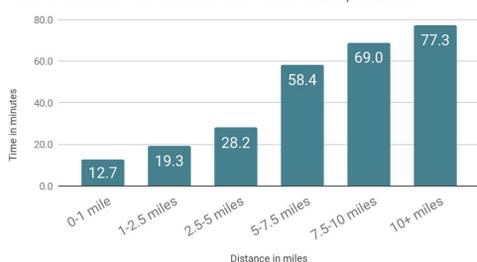
Commuter by Distance



Commuter by Mode of Transport



Time in minutes vs. Distance for Public Transportation



Results show a wide range of practices among different distance groups. 35% percent of all non-walking commuters live more than 10 miles away from campus. More than one third of all commuters, and more than 50% of all SOVs come from further than 10 miles.

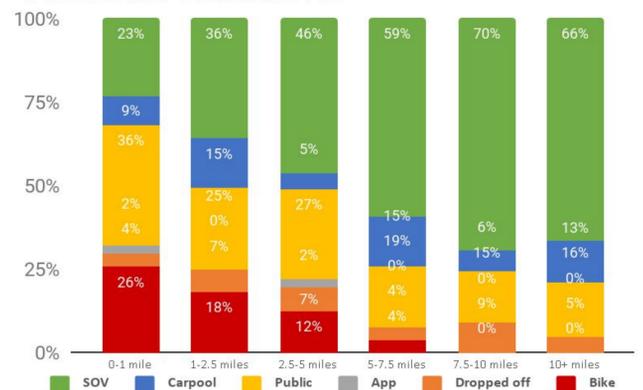
By using both the kind of transportation used by a student as well as their distance to campus, trends within students from specific distances and practices are more easily noticeable. Thanks to the advanced branching, we can know what commuters living within 5 miles answered and their reasons for not using public transportation or biking, as well as how their answers differed from the students living 5-10+ miles away.

Naturally, the percentage of students that use Single-Occupancy Vehicle increases as the distance from campus increases. Further, students that live more than 10 miles away are more likely to be part of a carpool. In addition, 73% percent of SOV commuters are interested in being part of a carpool if there were incentives to do so. More than 50% of all commuters that use SOV have not used an alternative mode of transportation in the last year.

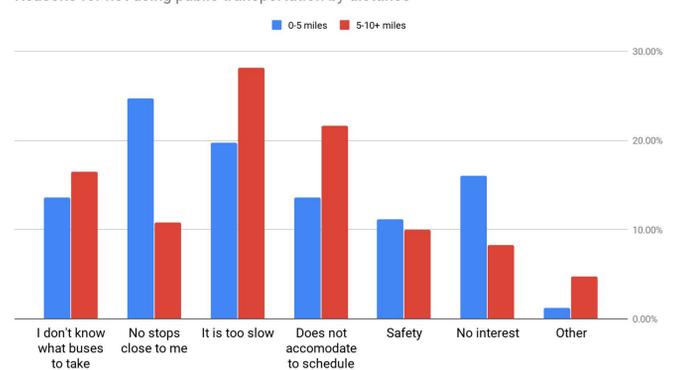
Public Transportation use drops from 36%-27% to >20% from 2.5-5 miles to 5-7.5 miles. While biking virtually disappears by the 5-7.5 mile range. Students who used public transportation as their usual commute also appeared to be only moderately content with the speed, availability of routes, and safety of buses. The data also allowed to determine how long public transportation takes depending on distance.

Biking students showed that it is only moderately safe to bike to UCR. Over 50% of students who bike expressed to be either very concerned or extremely concerned with bike theft at UCR.

Commuter Breakdown



Reasons for not using public transportation by distance



Conclusions

From the data gathered, it seems that there is no single approach to reducing the use of single-occupancy vehicles. Instead, the approach should vary depending on distance; students that live within 5 miles should be encouraged to use public transportation or biking, while students that live more than 5 miles away should be encouraged to carpool.

Improvements need to be done to make public transportation and biking more accessible and desirable. The majority of students also expressed interest in workshops for public transportation and a bike sharing program.



Possible Improvements

There are several possible improvements that could be done to make this project better. First, one of the questions at the beginning of the survey would be to tell whether the person taking the survey is an undergraduate, graduate student, faculty or staff. Although a great majority of responses were from students, the exact percentage is unknown.

Furthermore, questions should be developed that better help explain the deterrents graduate students, faculty and staff face when using alternative modes of transportation.

It would also be helpful, albeit difficult, to gather data about where people live specifically. Also, maybe develop a way to tell other specific circumstances in which students live. Some students raised the concern that the survey did not reflect their need for a car due to their work. These two aspects could help tremendously in understanding what can be done to allow students to use their vehicles less often.

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