AN EXPERIMENT WITH REAL-TIME TRANSIT INFORMATION IN TAMPA

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Objectives & Methodology

- **Objective:** Quantify the impacts of real-time bus information on transit rider behavior and satisfaction
- **Methodology:** Behavioral experiment including small deployment of OneBusAway
- **Data Collection:** Before and after web-based survey distributed through transit agency website & email list
- **Location:** Tampa, Florida

Pretest-Posttest Control Group Research Design

A pretest-posttest research design with a control group is used to account for other variables. Participants were randomly assigned into groups after completing the first survey.

February 2013 (Completed)

- **Pre-TEST of Control Group** (231 participants)

May 2013 (Coming soon)

- **Post-TEST of Experimental Group** (232 participants)
- **Post-TEST of Control Group** (231 participants)

Pre-Wave Survey: Using OBA

65% of HART bus riders say they would use real-time information every time they ride the bus.

If you had access to OneBusAway, how often would you use it?

- Every time I ride the bus
- Most times I ride the bus
- Sometimes
- Rarely
- Never
- I'm not sure

Experimental Group

- 72%
- 18%

Control Group

- 58%
- 26%

Pre-Wave Survey: Ridership

51% of HART bus riders say they would ride the bus more frequently if they had real-time bus information.

If you had access to OneBusAway, would you change how often you ride HART buses?

- I would ride the bus more often
- I would ride bus less often
- No, I would ride the bus about same
- I'm not sure

Control Group

- 48%
- 39%
- 12%

Experimental Group

- 55%
- 33%
- 9%

Pre-Wave Survey: Technology Adoption

Most HART bus riders have access to digital technologies. 46% of survey respondents use an Android smartphone and 64% use computers.

What technologies/devices do you use?

- Text Messaging
- Cell Phone (not smartphone)
- Laptop or Desktop Computer
- Tablet
- Other Smartphone
- Android
- Blackberry
- iPhone

Research Questions & Literature

- Does real-time information increase transit ridership?
- Prior research by Tang et al. (2012) and Zhang (2010)
- Does real-time information decrease wait times?
- Prior research by Watkins et al. (2011)
- Does real-time information increase satisfaction with transit service?
- Prior research by Ferris et al. (2011) and Zhang (2010)
- Does real-time information increase the perception of safety?
- Prior research by Zhang (2010) and Ferris et al. (2011)
- Does real-time information decrease the transfer penalty?
- No known prior research

References


Future Research

- Post-Wave Survey: Conduct the post-wave survey in May
- Statistical Analysis: Compare the survey answers from the OneBusAway test group with the control group
- Regression Analysis: Model change in frequency of bus travel (per week) due to OneBusAway

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