Making It Stick: Improving effectiveness of Commuter Assistance Program (CAP) communication messages and materials using neuromarketing

April 5, 2023

Agenda

- Presentation of Neuromarketing study/results – 30 minutes.
- Practice applying what you learned – 20 minutes
- Practice individually using the guidelines with personal promo materials - 35 minutes
- Group discussion - How do you see this applying to your work/projects or initiatives – 10 minutes
Who we are…

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Associate Professor
College of Public Health at USF

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Program Director, TDM Program
Center for Urban Transportation Research (CUTR), USF

Dove Wimbish
PhD Candidate
College of Education, USF

Rob Hammond, DBA, MBA, MSE
Assistant Professor & Director
MUMA College of Business at USF

Not pictured: Yuqi Wang, MS student in Marketing, MUMA College of Business, USF

Study Overview

**Purpose:** To use neuromarketing techniques to ascertain the effectiveness of communication materials and use insights to improve effectiveness.

**Process**
1. Planning
2. Testing the materials
   a) Round 1 of testing
   b) Revise materials based on data
   c) Round 2 of testing
3. Disseminating
What is Neuromarketing?

Biometric Behavior Research

The study of how people's brains respond to advertising and other brand-related messages by monitoring brainwave activity, eye tracking and skin response.

Neuromarketing methods we used

Eye-Tracking with Areas of Interest

Eye Gaze Mapping
**Methods examples**

**Eye Tracking**

**Eye Gaze Mapping**

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Planning

Step 1: Ask the Stakeholders

- Who is the Target audience?
- What calls to action are common on materials?
- Who should be the participants in the study?
- Which categories of materials should we (and should we not) solicit?

Collection of communication materials

- FDOT and CAPS reps nationwide submitted **121 communication materials**
- Categorized materials based on Call to Action
- 9 Categories for Call to Action:
  - register/enroll/attend
  - Change of mode
  - Contact/call/visit us online
  - Download the app
  - Form/join
  - Log/track
  - Redeem
  - Website front page
  - Videos

- Selected few materials by category through survey with stakeholders*

Submission Origins

- Florida Department of Transportation
- Apalachee Regional Planning Council
- University of South Florida’s Center for Urban Transportation Research
- TBARTA
- Commuter Services of Pennsylvania
- Delaware Commute Solutions
- Destination Sales & Marketing Group
- Greater Madison MPO
- Movability, Central Texas TMA
- Oregon Department of Transportation
- Steer Group
- Thurston Regional Planning Council
- University of California in Southern California
- Virginia Department of Rail and Public Transportation
Planning

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Selected a few materials by category through survey with stakeholders*

Planning: Communication/Videos Selected

Videos

- “Fall into a Green Commute”
- “Teleworking During COVID-19”
- “reThink Your Commute: Earn Rewards, (purple app logo)”
- “GET THERE CHALLENGE! (pink logo)”

Selected videos:
- RideShareOnline.com
- “Fall into a Green Commute”
- “Teleworking During COVID-19”
- “reThink Your Commute: Earn Rewards, (purple app logo)”
- “GET THERE CHALLENGE! (pink logo)”

Selected articles:
- “Fall into a Green Commute”
- “Teleworking During COVID-19”
- “reThink Your Commute: Earn Rewards, (purple app logo)”
- “GET THERE CHALLENGE! (pink logo)”
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**Round 1: Testing materials**

**Sample**

- **Block 1** (n=22)
  - a1, a2, a3
  - t4
  - v5

- **Block 2** (n=21)
  - a6, a7, a8
  - t9
  - v10

- **Block 3** (n=23)
  - a11, a12, a13
  - t14
  - v15
Material testing (continued)

2b: Revision of materials

• Evaluate round one results
• Narrow materials to four materials based on effectiveness
• Send materials to graphic artist
• Researchers approve revisions
• Recruit participants for Round 2

Round 2: Testing materials

2c: Round 2 testing

• Same conditions as round 1
• N=16 participants
• Slightly older demographics
• Revised survey (to work better with the technology)
Results: (Sample 1) - Get There Challenge

Revision of Communication Materials
Results: Get There Challenge

What do you think this ad is telling you to do?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Original Percentage</th>
<th>Revised Percentage</th>
<th>Difference Percentage Point Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redeem rewards or points</td>
<td>9%</td>
<td>56%</td>
<td>47%</td>
</tr>
<tr>
<td>Form/Join (a carpool / vanpool)</td>
<td>24%</td>
<td>39%</td>
<td>15%</td>
</tr>
<tr>
<td>Download the App</td>
<td>24%</td>
<td>63%</td>
<td>39%</td>
</tr>
<tr>
<td>Contact us</td>
<td>10%</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td>Log or track my miles</td>
<td>0%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Educate myself</td>
<td>24%</td>
<td>9%</td>
<td>-15%</td>
</tr>
</tbody>
</table>

What does the communication material say you will get if you do what is being asked?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Original Percentage</th>
<th>Revised Percentage</th>
<th>Difference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rewards</td>
<td>19%</td>
<td>38%</td>
<td>19%</td>
</tr>
<tr>
<td>Points</td>
<td>9%</td>
<td>38%</td>
<td>29%</td>
</tr>
<tr>
<td>Time</td>
<td>19%</td>
<td>13%</td>
<td>-6%</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>71%</td>
<td>38%</td>
<td>-33%</td>
</tr>
<tr>
<td>Peace of Mind</td>
<td>14%</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>19%</td>
<td>9%</td>
<td>-10%</td>
</tr>
</tbody>
</table>

What does the communication material say you will get if you do what is being asked?

<table>
<thead>
<tr>
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<th>Original Percentage</th>
<th>Revised Percentage</th>
<th>Difference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register/Enroll in a rewards program or event</td>
<td>43%</td>
<td>50%</td>
<td>7%</td>
</tr>
<tr>
<td>Change my mode of commuting</td>
<td>24%</td>
<td>63%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Based upon how well you understand this ad, how likely are you to do what this ad is asking you to do?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Original Percentage</th>
<th>Revised Percentage</th>
<th>Difference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Unlikely</td>
<td>38%</td>
<td>13%</td>
<td>-25%</td>
</tr>
<tr>
<td>Somewhat Unlikely</td>
<td>38%</td>
<td>13%</td>
<td>-25%</td>
</tr>
<tr>
<td>neither Likely or Unlikely</td>
<td>9%</td>
<td>25%</td>
<td>16%</td>
</tr>
<tr>
<td>Somewhat Likely</td>
<td>19%</td>
<td>50%</td>
<td>31%</td>
</tr>
<tr>
<td>Very Likely</td>
<td>19%</td>
<td>9%</td>
<td>-10%</td>
</tr>
</tbody>
</table>

This ad is for

<table>
<thead>
<tr>
<th>Audience</th>
<th>Original Percentage</th>
<th>Revised Percentage</th>
<th>Difference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me</td>
<td>52%</td>
<td>68%</td>
<td>16%</td>
</tr>
<tr>
<td>My Family</td>
<td>5%</td>
<td>12%</td>
<td>7%</td>
</tr>
<tr>
<td>Someone in my Community</td>
<td>48%</td>
<td>61%</td>
<td>13%</td>
</tr>
<tr>
<td>My Friends</td>
<td>10%</td>
<td>38%</td>
<td>28%</td>
</tr>
<tr>
<td>People I work with</td>
<td>9%</td>
<td>26%</td>
<td>17%</td>
</tr>
<tr>
<td>National Audience</td>
<td>48%</td>
<td>6%</td>
<td>-42%</td>
</tr>
</tbody>
</table>

Tips*

- Use simple, clear messages
- Frontload important information
- Use formatting techniques for emphasis
  - Lists, bold, white space, color, boxes
- Take advantage of classic gaze patterns
- Don’t muddy the waters!
  - Place logos/branding & bar/QR codes out of the way of messaging

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Results: Get There Challenge

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<td>Form &amp; Join a carpool (or vanpool)</td>
<td>24%</td>
<td>69%</td>
<td>45%</td>
</tr>
<tr>
<td>Download the App</td>
<td>24%</td>
<td>63%</td>
<td>39%</td>
</tr>
<tr>
<td>Contact us</td>
<td>10%</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td>Participate in a rewards program or event</td>
<td>10%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Change my mode of commuting</td>
<td>24%</td>
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<td>-15%</td>
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<tr>
<td>Other</td>
<td>19%</td>
<td>0%</td>
<td>-19%</td>
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</table>

| At least a 10 Percentage Point Change          | 0%                  | 0%                 | 0%                    |

What does the communication material say you will get if you do what is being asked?

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</tr>
<tr>
<td>Neither Likely or Unlikely</td>
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<td>25%</td>
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<td>19%</td>
<td>50%</td>
</tr>
<tr>
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<td>9%</td>
</tr>
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<table>
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<td>38%</td>
</tr>
<tr>
<td>People I work with</td>
<td>5%</td>
<td>28%</td>
</tr>
<tr>
<td>No One I know</td>
<td>48%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Tips*

- Use simple, clear messages
- Frontload important information
- Use formatting techniques for emphasis
  - Lists, bold, white space, color, boxes
- Take advantage of classic gaze patterns
- Don’t muddy the waters!
  - Place logos/branding & bar/QR codes out of the way of messaging

---

*Moran, Kate. (2020) How people read online: New and old findings. NN/g Nielsen Norman Group. From: How People Read Online, 2nd Ed. [https://www.nngroup.com/articles/how-people-read-online/]
Conclusions

C1. To what extent do participants understand what they are being asked to do (Comprehension)?
Participants need to understand the call to action.
- Based on results, we can report that improving marketing materials based on the results of applying neuromarketing techniques can enhance comprehension by an average of +29.5%.

C2. To what extent are the materials attractive to participants and why (Attractiveness)?
Participants want to know where to find the important points.
- We have demonstrated that revision of materials based on the results of neuromarketing testing can enhance the chances that participants will respond to attractiveness by an average of +20.25%.

C3. To what extent do participants find the ad acceptable or applicable to them (Acceptability)?
- Participants want to know what they will get. Based on comparative results, we can report that revisions to ads based on the results of neuromarketing testing can increase acceptability of the ads by an average of +24%.

Conclusions (continued)

C4. How relevant are the ads to the participants and their lives (Relevancy)?
Participants want the information to be relevant to themselves or people they know.
Based on comparative results, we can report that improving marketing materials based on the results of applying neuromarketing techniques can increase relevancy to participants by an average of +22.25%.

C5. How compelling are the ads in engaging participants to complete the call to action (Persuasiveness)?
Participants want to do what is right, logical and compelling. Based on comparative results, we have shown that improving materials based on the results of applied neuromarketing techniques can increase the likelihood of respondents completing the call to action by an average of +22.25%.
Recommendations from Pilot

1. **Don’t Muddy the Waters!**
   - Place Logos/Branding & Bar/QR Codes out of the way of messaging
   - Use simple, clear messaging
   - Use white space

2. **Strategic Placement**
   - Frontload the important information on the top left with the order of emphasis decreasing as you progress down the page
   - Take advantage of Classic Gaze Patterns (Moran, 2020)

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**Example: F-Shaped Gaze Pattern**

- Users won’t read your text thoroughly
- Most important information must be in first two paragraphs (upper left)
- Use bullet points and subheads

Source: envatotuts+
Other Types of Gaze Patterns

Layer-cake pattern
consists of fixations made mostly on the page’s headings and subheadings, with deliberate occasional fixations on the (body) text in between.

Spotted pattern
focuses on specific elements or words that are spread throughout the page layout.

Commitment pattern
reads all

Recommendations from Pilot (continued)

3. Take advantage of prime fixation points!
   • About 1/3 down on the left, a little towards the center of the graphic
   • Anywhere there are faces
   • Center top

4. Use formatting techniques like lists, bold text, white space, and color for emphasis

5. When using videos, keep your eye on the moving object!
   • Focus main ideas center screen
   • Be aware of what’s happening in the background
   • Location, location, location!
   • Use only one call to action!
Recommendations

6. Don’t bury the call to action at the bottom of a content heavy page
7. Think mobile – keep brief
8. Use skimmable content
9. Apply visual text effects on subheadings such as different colors, larger font, different typefaces, and effects such as bolding
10. For brochures, look to make it useful so they hold on to it (e.g., map of bikeshare stations)

Questions & Advice

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ADVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>In what order is the type on the left side bar?</td>
<td>Any side bars should be ordered most important to least important.</td>
</tr>
<tr>
<td>What is the most important message on the page?</td>
<td>Place the most important message a little to the right of center left. This is where the call to action should go.</td>
</tr>
<tr>
<td>Are all the lines of text necessary?</td>
<td>Create more white space for panels.</td>
</tr>
<tr>
<td>Where should people be placed?</td>
<td>Faces should be on the right away from the messaging, and if there are two faces, messaging should be between the faces.</td>
</tr>
<tr>
<td>Where should logos or QR codes go?</td>
<td>Logos, bar codes or QR codes should go in the bottom right of the ad.</td>
</tr>
<tr>
<td>Where should contact information go?</td>
<td>Contact information should go in the bottom left. Do not repeat logos.</td>
</tr>
</tbody>
</table>
Activity 1: Suggest changes based on what you observe from gaze points

Revision of Communication Materials
Our suggestions for improving the effectiveness of this ad based on the results of the first round of pretesting:

1. **Eliminate competition for message.**
   - Move “Win $100 & Other Prizes” down to occupy key focus location.
   - Create more space for the “Win” message by making the stripe fatter and eliminating the brand.
   - Remove the “Get Your Rewards” to create more white space and eliminate confusion

2. **Clean up branding and contact info**
   - Put one brand in the bottom left corner and eliminate the rest
   - Place a QR code for more information in bottom right with a web address.
   - Create white space.

3. **Simplify and Clarify Text**
   - Change the call to action in step 1 to “Download” because that is really what we want them to do
   - Make each step larger, lengthen the white space between them, and make sure they are each one line only

4. **Make Judicious Use of Graphics**
   - Change the logos to reward logo symbols,
   - Make them opaque so they don’t compete with the message
   - Add a commuter opaque in background so that a subliminal face appears right were we want the audience to focus.
Activity 2

Practice individually using the guidelines with personal promo materials

REPORT BACK AND DISCUSS
What past participants say about our Social Marketing in Transportation Certificate

This course has been a great catalyst for thinking about marketing differently. It has been inspiring and motivating.

For any marketing or communications professional, I highly recommend this course. Although the topic was based on transportation, the ideas we learned and discussed are extremely valuable and can be applied towards any marketing subject matter. I am very impressed by the final presentations from all groups and am excited to take and apply what I’ve learned in this class.

This class was a great opportunity to learn and practice marketing principles for a targeted audience. It taught me how to communicate and influence that target audience to change behaviors.

I really like how this course was divided throughout several weeks. It allowed me to digest information more easily and implement them into homework assignments. It was great practice for real world marketing strategies in transportation!

Enrollment begins in July
www.commuterservices.com

USF Center for Urban Transportation Research would like to thank the Florida Department of Transportation* for funding this study, the USF Neuromarketing Lab for testing services, and the following agencies for their involvement as stakeholders and contributors of testing communication materials:

- Apalachee Regional Planning Council
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Questions, please contact:

Mahmooda Khaliq Pasha – mkpasha@usf.edu, 813.974.4390

Phil Winters – winters@usf.edu, 813.974.9811

*Disclaimer: The opinions, feelings, and conclusions expressed in this presentation are those of the authors and not necessarily those of the State of Florida Department of Transportation.