DEVELOPMENT OF A MOBILE NAVIGATION APPLICATION FOR SENIOR CITIZENS IN URBAN AREAS

USER FEEDBACK SURVEY RESULTS

4/27/2018
Summary (Pre-screening Part)

- 42% of participants preferred to answer surveys in Spanish
- All of participants were smartphone users
- All of the smartphone or tablet users have Android operating system in their device
- All of participants were assisted to demonstrate the application during survey
Summary (Part 1: About Yourself)

- 79% of participants age were 65 or over.
- 79% of participants were female.
- 100% use a smartphone, followed by a tablet at 42% and home computer at 42%.
- 55% do not need assistance with their electronic device(s).
- Smartphones are mainly used for calling with 100%, followed by 89% texting, and 84% taking photos. 61% of participants use their smartphone for navigation purposes.
Summary (Part 2: About the Urban Connector Application in General)

- 92% of the participants used the application at least once per week.

- 34% of participants strongly agree that the “home screen menu” is easy to use. 3% of the respondents strongly disagreed and they mainly asked to increase the font size.

- 66% of participants strongly agreed it was easy to understand, 16% of participants agreed that the “frequent places menu” is easy to use, there was 5% disagreement.
Summary (Part 2: About the Urban Connector Application in General)

- 66% of participants strongly agreed that, the graphic images are easy to understand, 10% of participants disagreed.
- 66% of participants strongly agreed that, entering their preferences was easy, no participants disagreed.
- 53% of the participants’ fear of getting lost reduced by using the application.
- 52% of the participants believed that they avoided traffic congestion by using the application.
- 53% of the participants agreed that their concern for arriving late reduced by using the application.
58% of participants strongly agreed, 42% of participants agreed that the names of the menus accurately reflect their functions. No participants disagreed.

58% of participants strongly agreed that, size of buttons and text met their visual needs. 3% of participants disagreed.

63% of participants strongly, 29% of participants agreed that the colors used in the application met their visual needs. There is no disagreement.
Summary (Part 4: Final Evaluation)

- Participants gave the application score of 3.47 stars in average over 5.00.
- 68% of participants would like to recommend the application to a friend.
- Suggestions for improvements can be listed as:
  - Functional icons
  - Name of places instead of addresses
  - Easier to write addresses
  - More icon options (Doctors, Malls, Movies, Casinos, Parks)
  - Voice command
  - Easier to use
  - Events happening in the city
  - Make application not crash and work properly
Total Number of participants: 38
Question 1: What is your age range?

Age Range [English responses]

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 55</td>
<td>0%</td>
</tr>
<tr>
<td>55 to 59</td>
<td>0%</td>
</tr>
<tr>
<td>60 to 64</td>
<td>18%</td>
</tr>
<tr>
<td>65 to 74</td>
<td>86%</td>
</tr>
<tr>
<td>75 or older</td>
<td>0%</td>
</tr>
</tbody>
</table>

Age Range [Spanish responses]

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 55</td>
<td>0%</td>
</tr>
<tr>
<td>55 to 59</td>
<td>6%</td>
</tr>
<tr>
<td>60 to 64</td>
<td>19%</td>
</tr>
<tr>
<td>65 to 74</td>
<td>25%</td>
</tr>
<tr>
<td>75 or older</td>
<td>44%</td>
</tr>
</tbody>
</table>
Question 1: What is your age range?
Question 2: What is your gender?
Question 2: What is your gender?
Question 3: Do you use any of the following electronic devices?
Question 3: Do you use any of the following electronic devices?
Question 4: If you selected one or more options, do you need assistance using these devices?

Assistance to Use Electronic Device [English responses]

- Yes: 41%
- No: 59%

Assistance to Use Electronic Device [Spanish responses]

- Yes: 50%
- No: 50%
Question 4: If you selected one or more options, do you need assistance using these devices?
Question 5: What do you do on your smartphone?
Question 5: What do you do on your smartphone?
Question 6: How often did you use the Urban Connector Application since the installation?

Urban Connector Use [English responses]

- Never: 9%
- Less than once per week: 55%
- One or two times per week: 36%
- More than two times per week: 0%
- Everyday: 0%

Urban Connector Use [Spanish responses]

- Never: 6%
- Less than once per week: 56%
- One or two times per week: 19%
- More than two times per week: 6%
- Everyday: 13%
Question 6: How often did you use the Urban Connector Application since the installation?

- Never: 8%
- Less than once per week: 55%
- One or two times per week: 29%
- More than two times per week: 3%
- Everyday: 5%
Question 7: What was the reason you used/did not use the application?

Reason of use/not use [English responses]

- Navigation: 42%
- Testing: 17%
- Did not Work: 21%
- Little need: 4%
- Crashed: 17%

Reason of use/not use [Spanish responses]

- Navigation: 31%
- Testing: 63%
- Did not Work: 0%
- Little need: 6%
- Crashed: 0%
Question 7: What was the reason you used/did not use the application?

Reason of use/not use [Combined]

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation</td>
<td>38%</td>
</tr>
<tr>
<td>Testing</td>
<td>35%</td>
</tr>
<tr>
<td>Did not Work</td>
<td>13%</td>
</tr>
<tr>
<td>Little need</td>
<td>5%</td>
</tr>
<tr>
<td>Not User Friendly</td>
<td>10%</td>
</tr>
</tbody>
</table>
Question 8: When you started using the application, entering your preferences (selecting the font size, language and impairments) and your home address were easy.
Question 8: When you started using the application, entering your preferences (selecting the font size, language and impairments) and your home address were easy.
Question 9: The screenshot on the right is the Frequent Places menu. This menu is easy to use.
Question 9: The screenshot on the right is the Frequent Places menu. This menu is easy to use.
Question 10: The screenshot on the right is the Home Screen menu. This menu is easy to use.
Question 10: The screenshot on the right is the Home Screen menu. This menu is easy to use.
Question 11: The graphic images (buttons, icons) of the application are easy to understand.

The Graphic Images [English responses]

- Strongly Agree: 50%
- Agree: 18%
- Neutral: 14%
- Disagree: 9%
- Strongly Disagree: 9%

The Graphic Images [Spanish responses]

- Strongly Agree: 88%
- Agree: 13%
- Neutral: 0%
- Disagree: 0%
- Strongly Disagree: 0%
Question 11: The graphic images (buttons, icons) of the application are easy to understand.
Question 12: The graphic images (buttons, icons) of the application are easy to understand.

Family Members and Friends Addresses [English responses]

- Strongly Agree: 27%
- Agree: 9%
- Neutral: 14%
- Disagree: 36%
- Strongly Disagree: 14%

Family Members and Friends Addresses [Spanish responses]

- Strongly Agree: 25%
- Agree: 44%
- Neutral: 25%
- Disagree: 0%
- Strongly Disagree: 6%
Question 12: The graphic images (buttons, icons) of the application are easy to understand.
Question 13: Your fear of getting lost is reduced with the use of the application.
Question 13: Your fear of getting lost is reduced with the use of the application.
Question 14: The Urban Connector application helped you to avoid the traffic congestion.
Question 14: The Urban Connector application helped you to avoid the traffic congestion.
Question 15: Your concern for arriving late for an appointment is reduced with the use of application.
Question 15: Your concern for arriving late for an appointment is reduced with the use of application.

Concern for arriving late [Combined]

- Strongly Agree: 29%
- Agree: 24%
- Neutral: 32%
- Disagree: 16%
- Strongly Disagree: 0%

Percentage Reduced
Question 16: The size of buttons and text met your visual needs.
Question 16: The size of buttons and text met your visual needs.

![Size of Buttons [Combined]](image)

- **Strongly Agree:** 58%
- **Agree:** 37%
- **Neutral:** 3%
- **Disagree:** 3%
- **Strongly Disagree:** 3%

Met visual needs
Question 17: The menu options accurately reflect their functions
Question 17: The menu options accurately reflect their functions

Menu Options [Combined]

<table>
<thead>
<tr>
<th>Reflect their functions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>58%</td>
</tr>
<tr>
<td>Agree</td>
<td>42%</td>
</tr>
<tr>
<td>Neutral</td>
<td>0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
</tr>
</tbody>
</table>
Question 18: The colors, labels and images used in the application met your visual needs.

### Colors, Labels, and Images [English responses]

<table>
<thead>
<tr>
<th>Met visual needs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>59%</td>
</tr>
<tr>
<td>Agree</td>
<td>36%</td>
</tr>
<tr>
<td>Neutral</td>
<td>5%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
</tr>
</tbody>
</table>

### Colors, Labels, and Images [Spanish responses]

<table>
<thead>
<tr>
<th>Met visual needs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>69%</td>
</tr>
<tr>
<td>Agree</td>
<td>19%</td>
</tr>
<tr>
<td>Neutral</td>
<td>13%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
</tr>
</tbody>
</table>
Question 18: The colors, labels and images used in the application met your visual needs.
Question 19: Did Urban Connector Application crash or freeze during use?

- Yes, several times: 55%
- Yes, just once: 14%
- No: 32%

**English responses:**

- Yes, several times: 55%
- Yes, just once: 14%
- No: 32%

**Spanish responses:**

- Yes, several times: 88%
- Yes, just once: 13%
- No: 0%
Question 19: Did Urban Connector Application crash or freeze during use?

Did Urban Connector crash or freeze [Combined]

- Yes, several times: 32%
- Yes, just once: 13%
- No: 55%
Question 20: Did you learn how to use the application quickly?

Learn How to Use Application [English responses]

Learn How to Use Application [Spanish responses]
Question 20: Did you learn how to use the application quickly?

Learn How to Use Application [Combined]

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>47%</td>
<td>24%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Yes: 47%
No: 24%
Not sure: 29%
Question 21: Does this application help you to be more effective and productive in your everyday activities?

Help be Effective and Productive [English responses]

Help be Effective and Productive [Spanish responses]
Question 21: Does this application help you to be more effective and productive in your everyday activities?
Question 22: Would you recommend the application to a friend?

I would recommend the app to a friend [English responses]

I would recommend the app to a friend [Spanish responses]
Question 22: Would you recommend the application to a friend?
Question 23: What would be your rating for the application?

- English Responses: 2.77/5.00
- Spanish Responses: 4.44/5.00
- Combined Responses: 3.47/5.00
Question 24: What are the features do you think we should add to the application?

- **English**
  - Make it easier to use
  - Voice activation - like google microphone should send location (current location) to other people. There are some icons inactive - they should be functional.
  - Make it simpler explain better how to use it fix the application
  - Fix icons to make it work
  - Fix application
  - Make it work Name of places instead of addresses
  - Modifying it to make it work fix icons
  - Make it simpler
  - Mimic other existing applications not user friendly make it easier
  - Voice command more icons Emergency phone numbers contacts and 911 Be able to locate wherever they are
  - Improve icons to work
  - Map did not work. it did not open. it kept on crashing. Explain how to use it better
  - Put name instead of addresses because it took me to new Mexico instead of Texas or make it easier to fill in the address in friends and family icon
  - Safest not fastest Piggybacking google - it is making me use google maps
  - Work on icons and it would even be more excellent
  - Improve icons so they can work
  - More icons
  - Make it work could not get very far in the app
  - We don’t need familiar places

- **Spanish**
  - Events happening in the city, and parks
  - Name the place instead of addresses More icons
  - More icons like going to mall
  - Write name of place instead of address More icons (doctor)
  - Doctor icon
  - Open the icons
  - More options/ More icons such as fine arts, theaters, movies, events
  - Fix icons make it easier to put addresses on friend and family Name of place instead of address voice activation
  - Voice command
  - Make it easier to see the buttons