IPRO 343

Improving Communication Quality of the Drive-Thru Experience
Statement of the Problem

- In the quick-service restaurant (QSR) industry, a 2007 QSR Consumer Drive-Thru Preference Survey found that “speaker communication” was ranked as “important” by a significant proportion of those surveyed.
- “Communications via speaker” received a satisfaction rate from only about a third of the consumers surveyed.
- Thus, in the area of communication, a gap exists between consumer ratings of importance and satisfaction, indicating a critical need (by industry standards) for improvement.
The primary objective of IPRO 343 is to identify the communication issues which affect the efficiency and effectiveness of the drive-thru experience at fast food restaurants. The team will also:

- examine factors relating to acoustics that influence the drive-thru experience, and will look for potential areas in which the drive-thru experience can be improved.
- develop and conduct experiments related to these factors, to test pre-established hypotheses.
Goals and Objectives of the Project

- establish a baseline for intercultural issues in quick service restaurant communication by including a subject group of non-native English speakers in the experimental design.
- make recommendations about possible solutions or further studies which may need to be conducted.
Team Organization

---

**Team A Members:**
Shavanna Pinder, Halcyon Lawrence, Russell Ucci, Susan Mallgrave, **Scott Justus** (leader)

---

**Team B Members:**
Shaun Doran, Kevin Arnold, Matthew Campen, Karen Hong, **Sarah Johnson** (leader)

---

**Sub-Team A**
Acoustics
Sarah Johnson
Sub-Team Leader

---

**Sub-Team B**
Experimental Design
Scott Justus
Sub-Team Leader

---

**Faculty Advisors**
Matthew Bauer and Kathryn Riley

---

**Co-Team Leaders**
Kevin Arnold and Halcyon Lawrence
## Team Responsibilities

### Team A
- Babble and Stimulus recordings (Due 10/23)
- White Noise Creation (Due 10/9)
- Equipment Procurement (Ongoing until experiment start, 10/27)

### Team B
- Stimulus Script (10/9)
- Intelligibility test (10/23)
- Software Interface (10/23)
- Data compilation process (10/27)
### 2x2 Experimental Design

<table>
<thead>
<tr>
<th></th>
<th>No Noise</th>
<th>White Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Babble</strong></td>
<td>20 Native Listeners</td>
<td>20 Native Listeners</td>
</tr>
<tr>
<td><strong>High Babble</strong></td>
<td>20 Native Listeners</td>
<td>20 Native Listeners</td>
</tr>
<tr>
<td></td>
<td>20 Non-Native Listeners</td>
<td>20 Non-Native Listeners</td>
</tr>
</tbody>
</table>
Progress Made

- Researched background information necessary for experiment
- Designed experiment, submitted ethics report to IRB
- Developed clear hypotheses and research method
- Began design of experiment interface
- Finalized subject recruitment plan
Obstacles So Far

- Lack of background information in linguistics amongst team members
- Initial project scope too wide—needed to narrow problem
- Difficulty for team members to shift from a consumer’s perspective to employee’s perspective regarding drive-thru environment
Potential Concerns

- Software interface learning curve
- Recruitment (100 participants needed)
- Time constraints
- Intelligibility test (must be well-crafted to yield useful data)
Questions?