Today’s Outline

- What?
  - Background
  - Research Question

- How?

- Results

- Why?
  - Implications

- Conclusion
  - Limitations and Future Investigations
  - Questions?
Introduction – A Rising Trend
Is it Ideal?

- Audio Narration
- Effect of Vocal Characteristics
- Pitch
Voices Pitch

Male = 120 Hz
Female = 210 Hz

Genetic Disposition = Natural Pitch

- Vocal Bands = Elastic
- Training = Wider Range
Voices Pitch

What’s it good for?

- Inflection
  - Alternative Meaning
- Emotions
- Hold Attention

(Rogerson & Dodd, 2005)
Voices Pitch and Social Perception

- **Voice Pitch + Social Perception**

- **Low Pitch Attributions:**
  - Attractiveness
  - Dominance
  - Masculinity

© Original Artist

“He’s the boss because he has the deepest voice, and—when it comes to making money—zero ethics.”
Voices and Marketing

- Pitch → Responsiveness to Persuasive messages

- Male + Low Pitch
  - More Pleasant + Persuasive

- Male + High Pitch
  - Less Confident + Truthful + Persuasive
  - More nervous and weaker

- 2003 Experiment:
  - Radio → Advertisement → Participant Rating
  - Low Pitch = More credible

Dahl, Ritchie & Shahin, 2003
Voices Pitch in the Classroom

- **Voice + Information Processing?**
  - Impressions (Authority → Attention → Learning)

- **Experiment**: (Apple et al., 1979)
  - Voice Pitch (20%) → Speaker Perception

- **Results:**
  - High = Less Truthful, Less Emphatic, More nervous

- **Why?:** = More effort
Our Hypothesis

- The effect of voice pitch manipulations, during computer based instruction, on Student Comprehension
  - Quantitative

- Predictions:
  - 40 Hz difference detectable
  - Low Pitch =
    - Positive Attributions + Higher Performance

- Novel Study
Methodology

**Stimuli:**
- Male Voice Manipulated
- Video PowerPoint Lecture

**Participants**
- 60 Undergrads
Methodology

PART 1: Watch 10 min Web Lecture

PART 2: Complete Confidence / Perception Questionnaire + M.C Comprehension Quiz.

PART 3: Students conduct a force-choice attribution task

Which is more intelligent?

Click Here to Listen to Voice 1

Click Here to Listen to Voice 2
Sample Question:

In a transporter malfunction, John’s stomach was accidently removed. What effect will it have on his eating habits?

A) John will eat more.

B) John will eat slightly less.

C) John will now experience highly variable levels of hunger.

D) No effect.
Results: Attributions

Attributions for High/Low Voice Pitch

- Assertive
- Attractive
- Authoritative
- Confident
- Convincing
- Dominant
- Intelligent
- Masculine
- Reliable
- Trustworthy
- Truthful

Number of Attributions

Higher Pitch

Lower Pitch

** Significant
Results: Performance

Effect of Voice Pitch on Comprehension

<table>
<thead>
<tr>
<th>Voice Pitch</th>
<th>Percent Correct (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Pitch</td>
<td>51.4</td>
</tr>
<tr>
<td>Low Pitch</td>
<td>53.9</td>
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Implications – What does this Mean

- Academic
- Good News for Instructors
- Questions Validity of Course Evaluations
Limitations and Future Investigations

**Limitations**

- Only Male Voices
- 40 Hz enough?

**Future Investigations**

- Pitch + Other = Effect?
- Pitch and Course Evaluations?
- Vocal + Facial Attractiveness = Learning?
Special Thanks To:

- Dr. Kim
- Dr. Feinberg
- Chris McAllister
- Greg Atkinson
Questions?
References


