Beating Stress into L2 Learners: Can Beat Gesture Awareness Impact Learning English?
Jeremy Cairns & Paul Brazeau

Research Questions
- Will practicing beat gestures in conjunction with word prominence promote greater clarity & naturalness in ESL learners’ formal presentations?
- Will ESL learners find learning beat gestures to be a useful tool for improving their presentation skills?

Language Processing & Gestures: Production
- Areas of the brain that process speech also process gestures.
- In production, speech and gestures are part of an integrated system (McNeill, 1992).
- Blind children make gestures when speaking to other blind children (Kelly et al., 2008).

Language Processing & Gestures: Comprehension
- For comprehension, oral & gestural input used (Özyürek and Kelly, 2007).
- Gestural & spoken input are processed similarly in Broca’s area (Kelly et al., 2009).
- Gestural input reduces processing burden of oral input in Broca’s area (Kelly et al., 2008).
- Areas managing hand control disrupted = speech comp. disrupted (Kelly et al., 2007)

4 Types of Gestures (McNeill, 1992)
1. Iconic
   - Make a picture with your hands.
2. Metaphoric
   - Make an abstract picture with hands.
3. Deictic
   - Point at something: abstract or actual.
4. Beat Gestures
   - Signify stress & move with the rhythm of an utterance.
   - Examples of beat gestures: quick flicks of a finger or chopping motion of the hand.
   - Can be superimposed on other kinds of gestures (McNeill, 1987).

Gestures in the classroom
(Taleghani-Nikazm, 2008)
Usually used to:
a) Clarify vocabulary comprehension. c) Give corrective feedback with visual cues.
b) Elicit vocabulary from learners.

Research on Beat Gestures
- Oral prominence of a word increases when a beat is produced (Krahmer & Swerts, 2007).
- Spoken emphasis & perceived prominence increase with beats (Krahmer & Swerts, 2007).
- Beats help create a physicalized sense of prosody (McCafferty, 2006).
Why Beats Are Important

English’s stress-timed nature can:
- be difficult for learners.
- hinder intelligibility.
Particularly true for learners with syllable-timed L1s (Japanese, Spanish)

Benefits of Beat Gestures for ESL Learners:
- Non-dominant hands
- Can focus attention

The Research Subjects

Composition of the Class:
- 15 students
- College students and professionals

Students’ assignment:
- Group presentation: 3 students per group
- Comparison of the Berkeley recycling program with their country.

Our Research

Sentence prominence lesson to prepare students for giving oral presentations:
- Experimental Group: Half received a lesson with beat gestures & sentence prominence.
- Control Group: Half the class received a lesson with only sentence prominence.

Data Collection

Number of Beat Gestures:
- Recorded the number of beat gestures in a presentation.
- Calculated the number used per minute.
- Compared the control and experimental groups.

Questionnaires:
- How helpful?
- How many used?
- Use in the future?
- How much preparation time?
- Teach again?

Results

Number of Beat Gestures:
- No strong correlation between practice and use.
- Preparation, culture, and personality were more important.
- Student comments.

Questionnaires:
- Ss found beat gestures to be very helpful.
- Ss were not satisfied with how many beats they used.
- Ss planned to use them in the future.
- Ss wanted to practice again.

Implications
- Can be used to give learners a better grasp of sentence prominence.
- Students see the benefits, but can not necessarily use beats.
- Repeated exposure over a period of time.
**Activity 1: Choosing Emphasis**

1. Use the sentences from “Part I” of page 4 of this packet, work with a partner.

2. Randomly read a sentence with appropriate emphasis and a beat gesture. Your partner will choose which sentence you read.

3. Switch roles.

4. Continue until you have read through all ten of the sentences.

**Activity 2: Obama’s Emphasis**

1. Read the excerpt from President Obama’s speech on page 4 of this packet. Predict which words will be emphasized (underline the words) and compare your choices with a partner.
   
   **Have you chosen any of the same words?**

2. Listen to audio of the speech and compare your predictions with what you hear. Put a check next to the emphasized words.
   
   **Are any of your choices the same as the words you predicted?**
   **Did your partner choose any of the same words?**

3. Watch video of the speech. Focusing on his gestures, circle the emphasized words.
   
   **Are any of the words the same as you chose when only hearing the speech?**
   **Did your partner choose any of the same words?**

**Activity 3: Producing Beats**

1. Choose 3 sentences from the Obama speech.

2. Read your sentences to your partner with appropriate prominence and beats.

3. Watching you (and without reading), your partner will decide which words contain prominence.

4. Perform 1 or 2 sentences each for the rest of the class. The class will guess which words have emphasis.
Part I: Choosing Emphasis

Directions: Randomly choose one of these sentences and read it to your partner. Put emphasis and a beat gesture on the word in capital letters. Your partner will guess the number of the sentence you read. Take turns being the reader and the listener.

1. BEN recycles his cans at home every week.
2. Ben recycles his CANS at home every week.
3. Ben recycles his cans at home every WEEK.
4. Ben RECYCLES his cans at home every week.
5. Ben recycles his cans at HOME every week.

Part II: Obama’s Emphasis

Directions: This is a small part of the speech President Obama gave to the United Nations recently. Underline the words that you think he emphasized in the speech.

Passage from Obama’s speech to the UN:

The danger posed by climate change cannot be denied. Our responsibility to meet it must not be deferred. If we continue down our current course, every member of this assembly will see irreversible changes within their borders.

Our efforts to end conflicts will be eclipsed by wars over refugees and resources. Development will be devastated by drought and famine. Land that human beings have lived on for millennia will disappear. Future generations will look back and wonder why we refused to act, why we failed to pass on -- why we failed to pass on an environment that was worthy of our inheritance.

And that is why the days when America dragged its feet on this issue are over. We will move forward with investments to transform our energy economy, while providing incentives to make clean energy the profitable kind of energy.
References


