Auditory Training

Audiological Rehabilitation

Auditory Training (AT)

□ “Instruction designed to ________
  an individual's use of residual
  hearing by means of both ________
  and ________ listening practice.”
Goals of Auditory Training

☐ Recognize speech _________
☐ Interpret auditory _________
☐ Maximize ________ hearing
☐ During formal training, you may even hide your _______

Candidates

☐ Pre-, Peri- and Post-lingual children
  ■ Learn to attend to the ________ _________
  ■ Learn to relate the auditory signal to their _______

☐ Adults with recent change in hearing _______
Design Principles of Formal AT

- Auditory skill
- ________
- Activity type
- Difficulty ________

Stages of Auditory Skills

- Sound ________
- Sound ________
- Identification
- ________
Sound Awareness/Detection

- Listening age vs. __________ age
- When does detection take place?
  - Mild losses- __________
  - Moderate losses- ___ weeks
  - Severe losses- ___ months
  - Profound loss- ___ months

Detection, cont’d

- Alerting to a sound
- __________ response behaviors
- Learning to listen
- Environmental sound __________
- Setting a listening window
- Building ________ detection skills
- Learning to wait
Fundamental Listening Experiences for Enhanced Sound Awareness

- Vocal play
- Music
- Environmental sounds
- Bumping into sounds
- MUST BE FUN!!!!

Sound Books

- Provides repetition of _______ and _________ targets
- Reinforces beginning _______ skills
- By sharing a book you can:
  - Practice establishing joint reference
  - Pair sounds with _________
  - Highlight specific sounds
  - Repeat language and sounds often
Making a Sound Book

- Select your ________
- Choose your book
- Choose your ________
- Create your pages
- Keep it special
- Use it ________!
- Add to or change your sound book

Speech Stimulation

- Done at the same time as sound awareness training
- Pick a core vocabulary of ___ words
  - Acoustically available
  - Visible on ____
  - Child oriented
  - ___ syllables, if possible
  - Enabling control for child
Sound Discrimination

Same

Or

Different

AKA - Pattern Perception

- Identifying the ________ of the task
- Changing the parameters of the task
- Ongoing perception
- Speech in ________ activities
Identification

- Recognition
- _____ Sets
- Examples:
  - “Show me …”
  - “Move…”
  - “Give me…”
- Bridging to _____ sets
- Level of language inputs
Comprehension

- Understanding spoken message
- __________
- Answer questions?
- I Spy
- _____ _____

Stimulus Units

- ________ training
  - Focus on syllable by syllable or ______ by ______ analysis of speech
  - Focus on acoustic cues
- ________ training
  - Focus on understanding the gist
Activity Type

**Formal**

Vs

**Informal**

Difficulty Level

- Closed set to _______ set to Open set
- Words to sentences
- Dissimilar to similar (______ of contrast)
  - “See you later” vs “Bye”
- _____ context to _____ context
- Structured to spontaneous
- Good _____ to Poor _____
## Content Hierarchy

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final consonants different by place of production</td>
<td>back / bat</td>
</tr>
<tr>
<td>Initial consonants different by place of production</td>
<td>tape / take</td>
</tr>
<tr>
<td>Initial consonants different by voicing</td>
<td>tea / key</td>
</tr>
<tr>
<td>Initial consonants different by voicing</td>
<td>done / gun</td>
</tr>
<tr>
<td>Final consonants different by voicing</td>
<td>two / do</td>
</tr>
<tr>
<td>Final consonants different by manner</td>
<td>fan / van</td>
</tr>
<tr>
<td>Final consonants different by manner</td>
<td>bat / bad</td>
</tr>
<tr>
<td>Final consonants different by manner</td>
<td>back / bag</td>
</tr>
<tr>
<td>Initial consonants different by manner</td>
<td>comb / coat</td>
</tr>
<tr>
<td>Some initial consonants different vowels</td>
<td>bus / bus</td>
</tr>
<tr>
<td>Some initial consonants different vowels</td>
<td>ball / boot</td>
</tr>
<tr>
<td>Some initial consonants different vowels</td>
<td>boot / boat</td>
</tr>
<tr>
<td>Some initial consonants different vowels</td>
<td>boot / boot</td>
</tr>
<tr>
<td>Some initial consonants different vowels</td>
<td>shoe / two</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>man / pan</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>shoe, cup, nose, hat</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>crocodile</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>apple</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>cap</td>
</tr>
<tr>
<td>Nons with different suprasegments (tonal, intensity, pitch)</td>
<td>STOP</td>
</tr>
</tbody>
</table>

## Context Manipulation

*Set size (Context), Linguistic Complexity and Acoustic Highlighting*

- **Set size (Context):**
  - Small Set
  - Medium Set
  - Large Set

- **Linguistic Complexity:**
  - Open Set
  - Bridge Set
  - A
  - B
  - C
  - D
  - E

**Acoustic Highlighting:**
- Use of syllable stress
- Use of stress
- Use of exaggerated intonation
- Use of reduced rate
- Use of preposed to hiatus
- Use of repetitions
Analytic Training

- Sound Awareness/Gross Sound Discrimination
  - _________
  - _________
  - _________
- _________ Auditory Training
- _________ Auditory Training
Consonant Auditory Training

- **3 key features**
  - Place: where in the mouth the primary constriction occurs, most difficult
    - _______ → /m/
    - Labiodental → /f/
    - Linguadental → /th/
    - _______ → /t/
    - Palatal → /sh/
    - _______ → /k/
  - Voicing: on or off /v, f/ *easiest (have/half) , /b,p/ *easiest auditory only (bop/pop)
  - Manner: type of articulatory movement
    - Stops, nasals*, glides, fricatives, affricates
  - _______ in word/syllable (initial, middle, final)

Synthetic Training

- **Suprasegmentals**
  - _______, Stress, Duration & Loudness
  - Also called _________ features
- **Discrimination**
  - ______-word vs ______-word
  - Single words
    - Monosyllables, Trochees, ________, Multi-syllabic
- **Identification**
- **Comprehension**
Formal Training

- ________ difficulty over time
- Use a variety of talkers
- Lots of training items in a short period of time
- Only briefly use ________ stimuli
- Both synthetic and analytic level stimuli
- Training progresses from ________ to ________ set
- ________ min a day in formal training – same time of day
- Formal objectives should be incorporated into informal exercises throughout the day.
- Training must be engaging and interesting!!!
Assessment Tools/Manuals

☐ DASL II: Developmental Approach to Successful Listening
  ■ 3 stages: sound ________, phonetic listening, ________ comprehension

☐ GASP: Glendonald Auditory Screening Procedure
  ■ 3 subtests: _________ detection, word identification, ________ comprehension

☐ SKI-HI: home intervention, developmentally based