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SOUNDS IN MOTION:  
Phonemic Awareness,  
Discrimination, and  
Stimulation through Movement

FRANCES SANTORE, M.A. CCC-SLP



# Listening and Learning

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- Perception and listening skills are critical to learning but rarely taught.
- Children spend 65-70% of their school day listening to their teachers and their peers.



# Communication Activities

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- **LISTENING: 1ST LEARNED**
  - MOST USED (45%) LEAST TAUGHT
- **SPEAKING: 2ND LEARNED**
  - Next Most Used (30%) Next Least Taught
- **READING: 3RD LEARNED**
  - Next Least Used (16%) Next Most Taught
- **WRITING: LAST LEARNED**
  - Least Used (9%) Most Taught

Martha Burns



# Research

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The linguist Steven Pinker remarks that a child's acquisition of language may be blocked if that child has difficulty with establishing certain sounds in their language. This problem may affect spoken language and may interfere with academic progress, such as reading.

Although perception difficulties may affect learning, production is the focus of most practitioners, such as speech-language pathologists or second language therapists.

The correlation between perception and production found in these studies suggests that practitioners should address both discrimination and production in their work.

Research concludes that the more the children can perceive a difference in vowels the easier the production of the vowels.



# WHOLE BODY LISTENING

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- 1. Ears
- 2. Eyes
- 3. Mouth
- 4. Brain
- 5. Hands
- 6. Feet
- 7. Back

# The Verbotonal System

- Prof. Petar Guberina (1913 - 2005)





## History of THE VERBOTONAL SYSTEM

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- 1. Prof. Petar Guberina – Head of Romance Languages Dept., Univ. of Zagreb
- 2. Developed as a program to teach foreign languages – originated concept of dialogue with ongoing pictures
- 3. Interest in auditory perception of the hearing impaired - need to improve rhythm and intonation in this population
- 4. Optimal Octaves
- 5. Suvag equipment
- 6. Body as a receiver and transmitter of sound



# Spanish

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- When a bilingual person is introduced to a new sound in their second language (L2) they automatically assimilate it to a (prototype) sound in their native language (L1). This prototype has been described as a magnet, attracting sounds that more closely resemble the prototype (Kuhl, 1991).
- If a bilingual speaker cannot establish an underlying representation of vowel differences between L1 and L2, this may affect production. There are at least seven English vowels that are absent in Spanish.
- Spanish speakers may also have difficulty with English because the consonants (th, -voiced and voiceless, sh, v, z, j, zh) do not occur in most Spanish dialects. Spanish also does not contain: (b,p,f,v,ch,m) in the final position in words.
- This affects the speaker's ability to communicate, frequently leading to frustration and their reluctance to engage in communication. A large segment of Hispanic students with limited English language skills are at risk for educational failure.



## Characteristics of each Speech Sound

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- 1. Pitch
- 2. Duration
- 3. Tension
- 4. Place in Space
- 5. Intensity

# CVC TEST WORDS



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daf

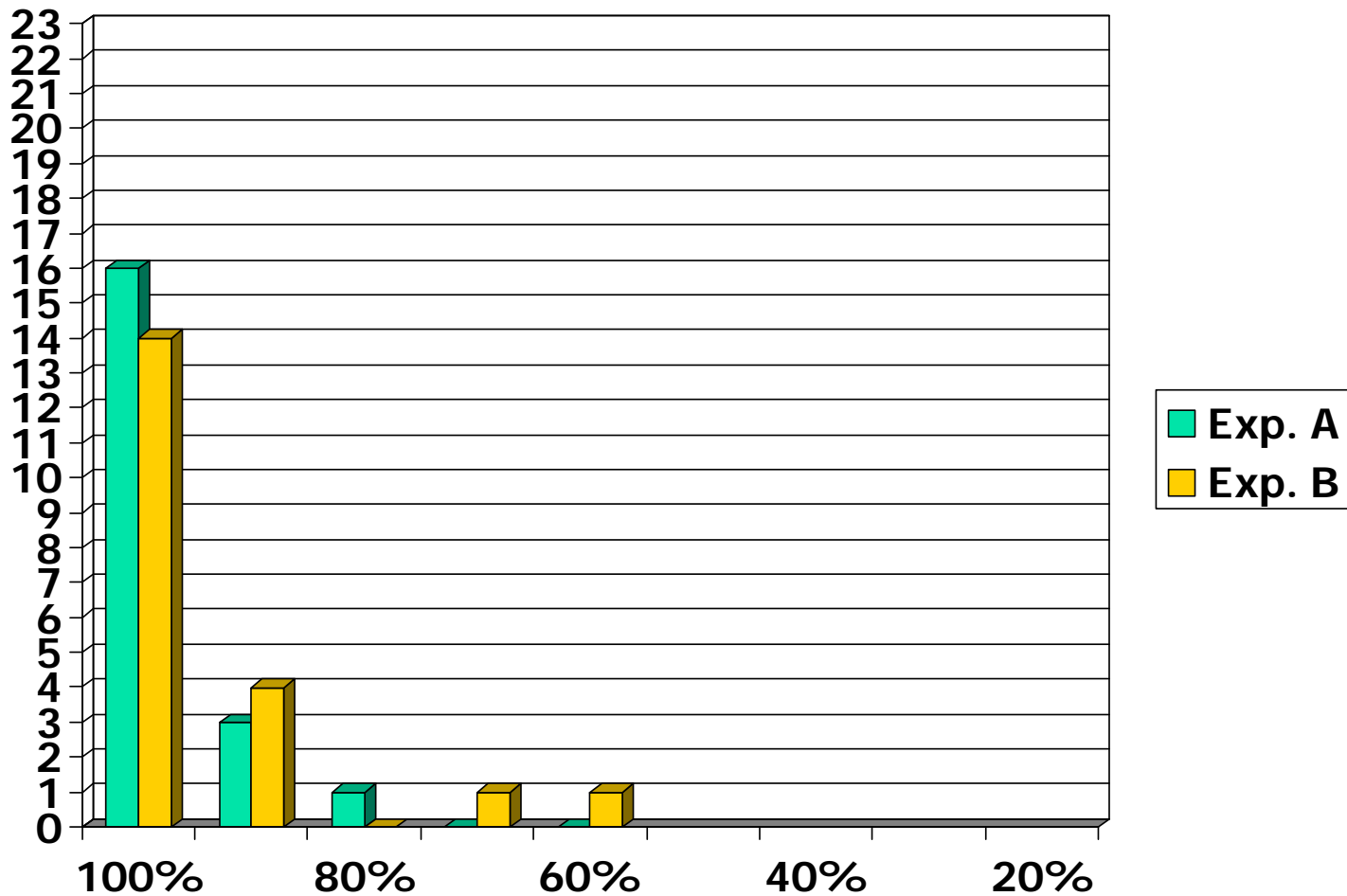
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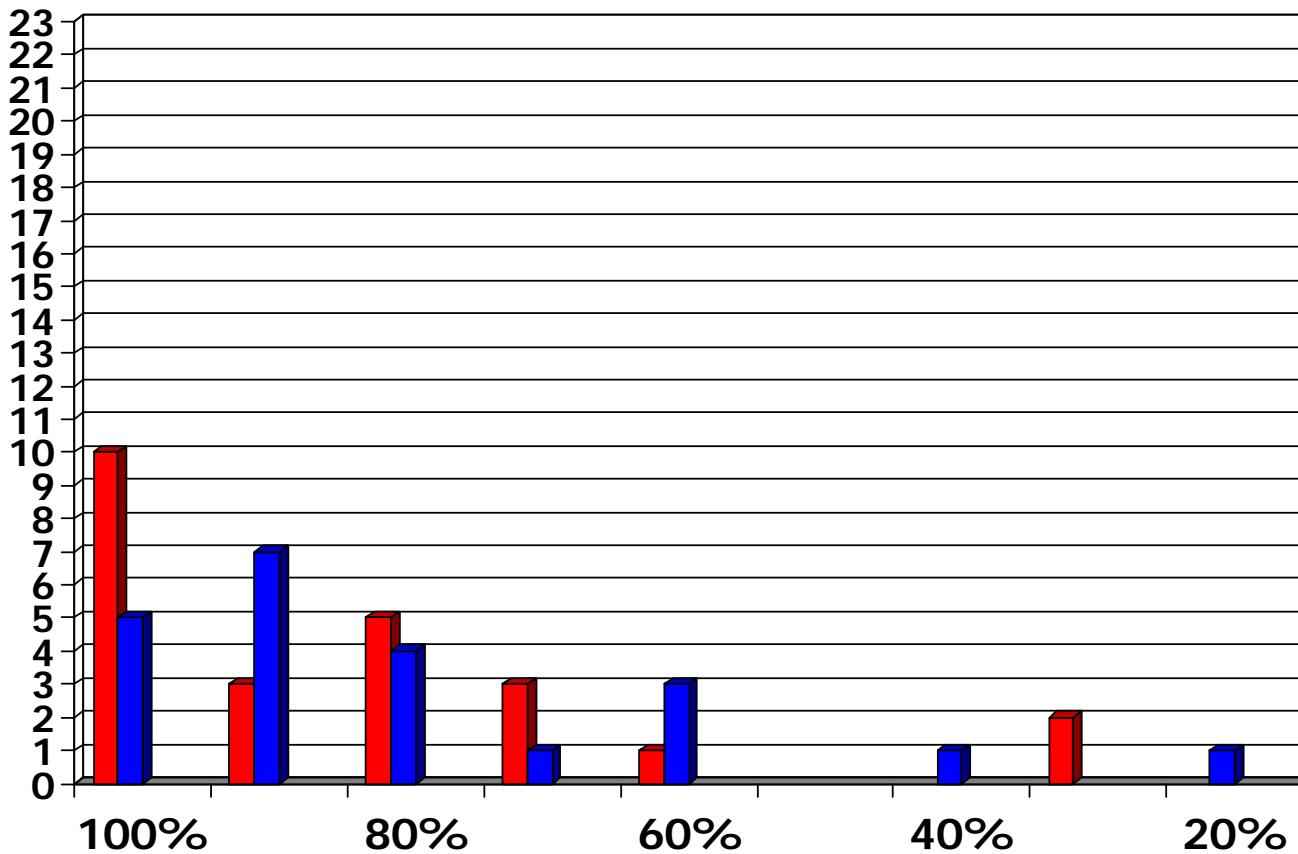
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# CVC Post Testing



# CVC Post Testing - Control





# LOW FREQUENCY (200 - 600)

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- p

o (boat)

- b

u (blue)

- n

oo (book)

- ng

or (poor)

- y

# LOW-MID FREQUENCIES (600 - 1200)

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- f a (father)
- v ow (now)
- k oi (oil)
- g o (hot)
- m u (cup)
- er (bird, her, fur)

# MID FREQUENCIES (800 - 1600)

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- t a (cat)
- d
- r (red)
- h
- l

# MID-HIGH FREQUENCIES (1600 - 3200)

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- sh                      i (it)
- ch                      e (get)
- j                        i (fight)
- zh (pleasure)        a (say)
- r (near, there,)

# HIGH FREQUENCIES (2400 -12,800)

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- th (voiced and voiceless)
- s
- z
- e (eat)

# GOALS OF THE SOUNDS IN MOTION PROGRAM:



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1. TO INTRODUCE THE CONCEPT OF ACTIVE LISTENING
2. TO IMPROVE AUDITORY DISCRIMINATION OF SHORT VOWELS AND CONSONANTS OFTEN CONFUSED
3. TO STIMULATE FOR CORRECT ARTICULATION
4. TO DEVELOP PHONEMIC AWARENESS SKILLS
5. TO DEVELOP VOCABULARY AND COMPREHENSION SKILLS

# The National Reading Panel - 2000



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- 1. Programs that teach phonics systematically and explicitly are the most effective.
- 2. Students learn how to convert letters to specific sounds and how to blend sounds together (from left to right) to read a word.
- 3. Phonics taught in an organized, cumulative and logical sequence allow the reader to apply his accumulating knowledge to deciphering and reading words he has never seen before.

# Phonemic Awareness Goals



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- Words can be broken down into phonemes
  - Segment words into constituent sounds
    - Blend sounds to create words
- Sounds can be deleted or added to create new words
- Phonemes can be heard at the beginning, middle or end of syllables and words



# LISTENING ACTIVITIES EMPHASIZED IN SOUNDS IN MOTION

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- 1. ATTENTION TO LISTENING
- 2. SYLLABIFICATION
- 3. AUDITORY DISCRIMINATION OF PHONEMES
  - PLACEMENT OF PHONEMES IN SYLLABLES AND WORDS
  - DISCRIMINATION OF SHORT VOWELS AND CONSONANTS OFTEN CONFUSED
- 4. AUDITORY SEQUENCING
- 5. AUDITORY MEMORY
- 6. FOLLOWING DIRECTIONS



# AUDITORY DISCRIMINATION

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- Consonants often confused:
  - p/t/k      f/s/th(voiceless)      sh/ch
  - b/d/g      v/th (voiced)      (tr/dr)
  - m/n      l/r/w
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- Vowels often confused:
  - Short i/e; o/u; a/e



# ORGANIZATION

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- 1. Classroom instruction weekly - 30 minutes per session
- 2. Program should last 12 - 15 weeks
- 3. Begin in September or January

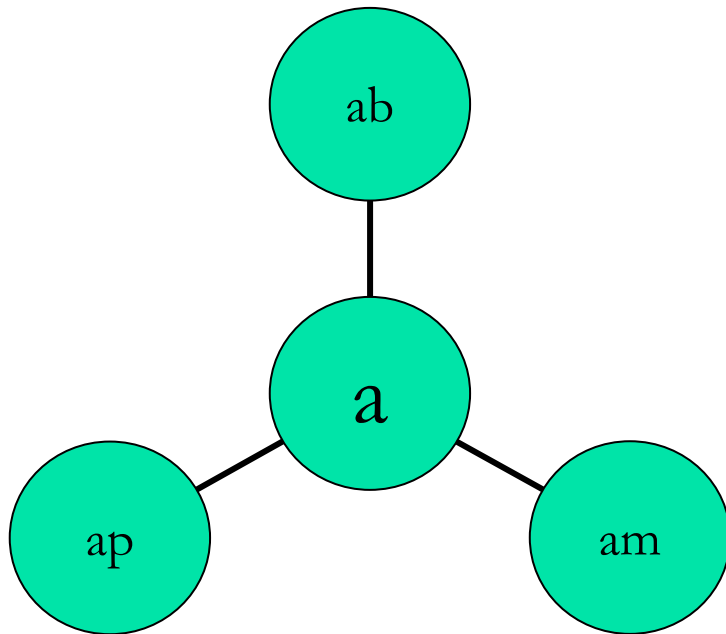
# Steps for Introducing Sounds



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- Introduce 2 -4 sounds per session
- Begin with 2 short vowels - first grade
- Begin with consonants - kindergarten
- Consonants introduced by phonetic progression

# Vowels



- Begin with short vowels: a–i are introduced first. Add -o-e-u during the semester.
- Demonstrate movement – ask children for the letter that makes the sound.
- Write the letter on the board.
- Have children do movement with you
- Have groups do the movement alone.
- Begin to introduce consonants at next session.
- Add vowel to consonants and combine both movements.
- Write syllable on the board.
- Have children lead the class in doing the syllable.



# FACTS ABOUT ACQUIRED HEARING LOSS:

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- 1. Most people will experience age-related hearing loss gradually over time.
- 2. Noise induced hearing loss is directly related to the decibel level of the sound and the duration of time to which you are exposed.
- 3. There is some question by experts regarding the direct applicability of industrial noise standards for music exposure.
- 4. All portable personal music players have the potential to cause noise induced hearing loss.
- 5. Hearing loss from excessive noise or music exposure is preventable.



# OUTPUT LEVELS FOR VARIOUS VOLUME SETTINGS ON MEDIA PLAYERS MEASURED BY ASHA

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■ Volume Setting	Decibel Output	Safe Time
■ 1/4	69 – 92	1 hour
■ 1/2	85 – 106	< 4 minutes - 30 min.
■ 3/4	98 – 115	< 1 minute - 10 min.
■ Full-on	108 – 125	unsafe



## HEARING CONSERVATION

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- 1. ANATOMY OF THE EAR – using large model of the ear
- 2. SAFE AND DANGEROUS SOUNDS – pictures, personal music systems, etc.
- 3. How to protect our hearing – discussion, demonstration of ear plugs, letter to parents

# Dangerous Sounds

- Some sounds can hurt our ears if they are too loud.





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# Safe Sounds

Use ear plugs when you play the drums



# STORIES



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USES:

1. TO REINFORCE PRODUCTION AND PERCEPTION OF SOUND
2. TO SEE NEW SOUND IN PRINT
3. TO LEARN NEW VOCABULARY AND COMPREHENSION SKILLS



# SOUNDS IN MOTION

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- IT IS FUN AND EASY TO LEARN.
- IT HELPS CHILDREN IMPROVE SKILLS IN:  
LISTENING, PHONEMIC AWARENESS, ARTICULATION,  
DISCRIMINATION OF SPEECH SOUNDS, AUDITORY  
PROCESSING, AND VOCABULARY DEVELOPMENT.
- IT CAN BE USED WITH A VARIETY OF POPULATIONS.
- IT HELPS TEACHERS WORK TOGETHER TO ACHIEVE COMMON GOALS.
- IT MAY BE APPLICABLE AS A TIER 1 - RESPONSE TO INTERVENTION APPROACH



# INFORMATION AND FEEDBACK - PLEASE CONTACT:

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