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BRIDGE

to better communication

Adult Aural Rehabilitation: Practical Approaches to Maximizing Benefit



Michael Douglas, MA, CCC-SLP, Cert AVT
Aural Rehabilitation Manager

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Disclosure



Michael Douglas,
MA, CCC-SLP, LSLS Cert AVT

Manager of Aural Rehabilitation

Michael is employed with MED-EL

Course Objectives

- Define aspects of adult hearing-related predicaments
- List three assessment methods that expose pre rehab needs and demonstrate post rehab effectiveness
- Describe a multi-dimensional holistic approach to aural rehabilitation
- List at least three practical solutions that can help address the post sensory management needs of adults who have hearing loss

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Why support AR for Adults?

Adult Hearing Loss



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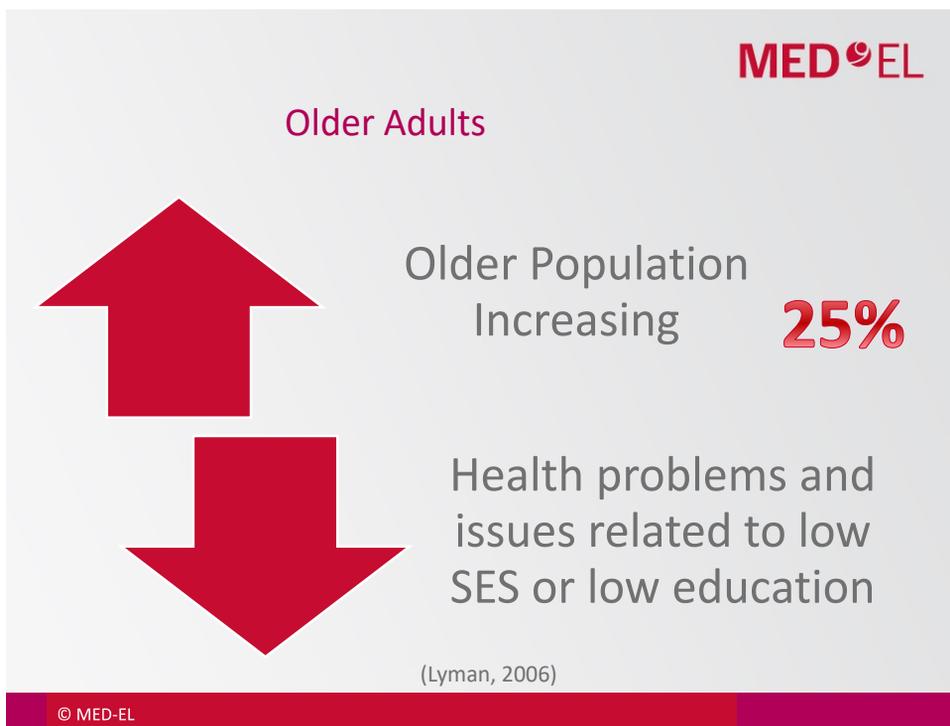
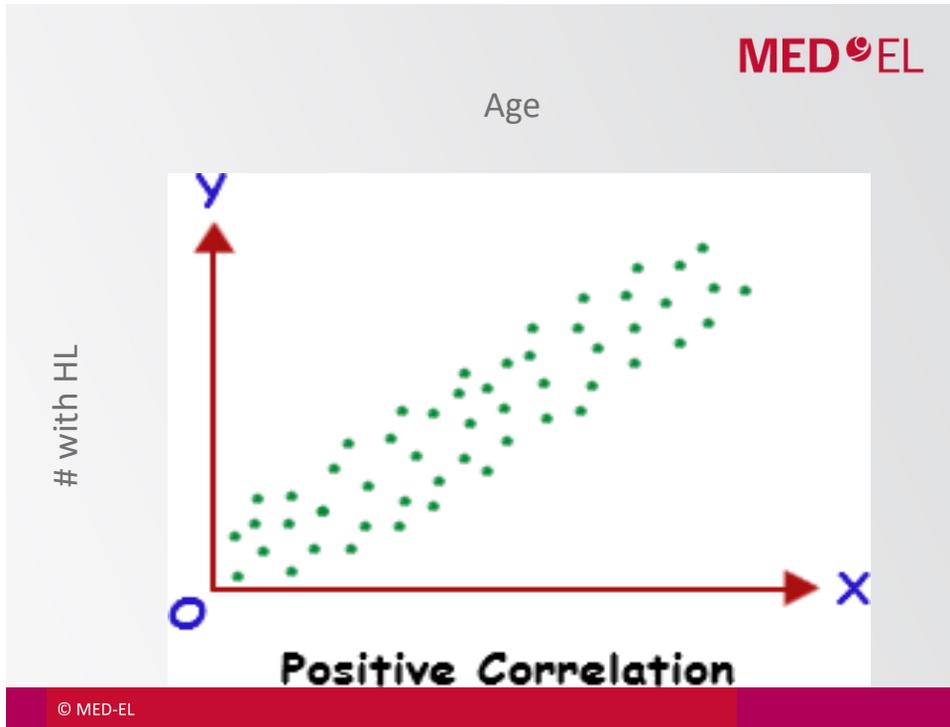
(www.linresearch.org; Davis et al, 2016)

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175 million



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Is AR for Adults Effective?

YES!

Passive

Active

so

Much

Slower

Faster

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(Boothroyd, 2007; Tye-Murray, 2014)

Objectives

Review Framework of Assessment

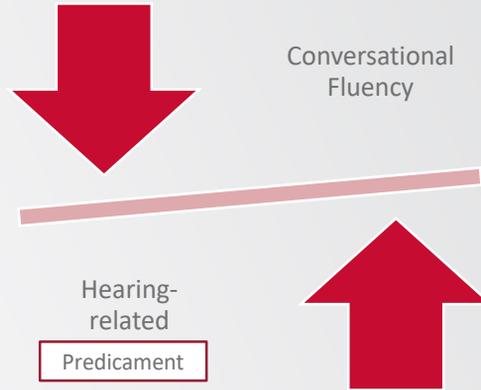
Review Framework of Adult Aural Rehab

Offer Practical Solutions

Relate to a Case Example

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Goal Of Aural Rehabilitation



(Tye-Murray, 2003; 2014)

Hearing-Related Disability/Predicament



(World Health Organization, 2001)

How is that measured?



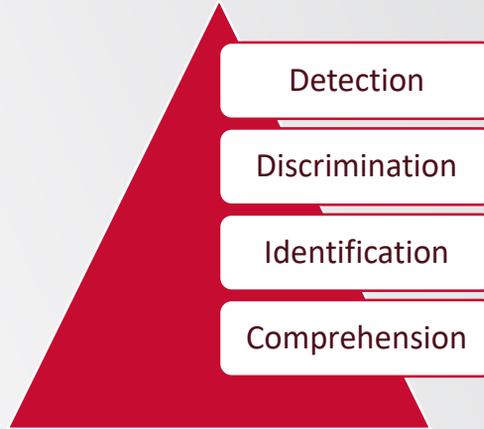
(Tye-Murray, 2014, Bennet et al, 2015)

Interview





Auditory Perception Testing

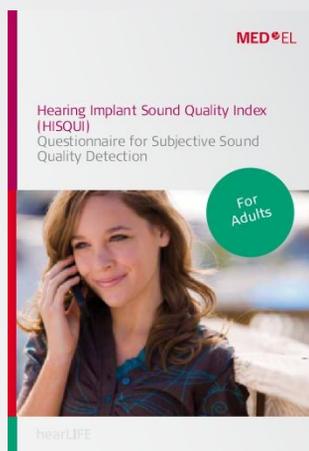


(Erber, 1984)

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Questionnaires



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Observations



Cochlear Implant Management Skills (CIMS)

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(Bennet, et al, 2016)

Observations



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(Tye-Murray, 2014)

Observations **MED⁹EL**



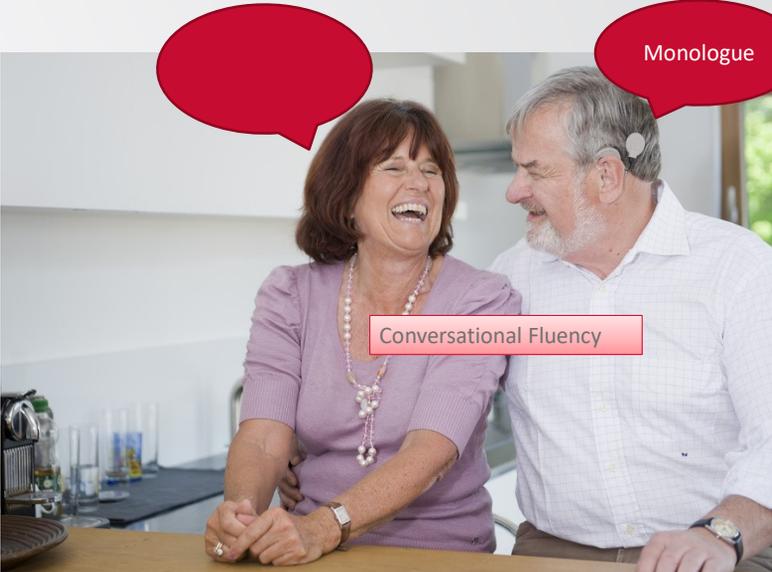
Would you like to take a yoga class?

Huh? Pour a glass?

Conversational Fluency

© MED-EL (Tye-Murray, 2014)

Observations **MED⁹EL**



Monologue

Conversational Fluency

© MED-EL (Tye-Murray, 2014)

Observations

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© MED-EL (Tye-Murray, 2014)

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Mean Length Turn

Joan: Has your new furniture arrived yet?
 Ann: Yes and I'm thrilled with it
 Joan: You said that it was going to be French regency.
 Ann: No, I didn't go with that. My husband wanted a deco look

Joan's MLT = # words/# utterances
 Ann's MLT = # words/# utterances

Mean Length Turn Ratio:
 High or Low Conversational Fluency?

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Mean Length Turn

Joan: Has your new furniture arrived yet?

Ann: Huh?

Joan: Your furniture?.

Ann: Looks around, shakes head

Joan: How are you doing? How is your Husband?...Tom?

Ann: Fine

Joan's MLT = # words/# utterances

Ann's MLT = # words/# utterances

Mean Length Turn Ratio:

High or Low conversational fluency?

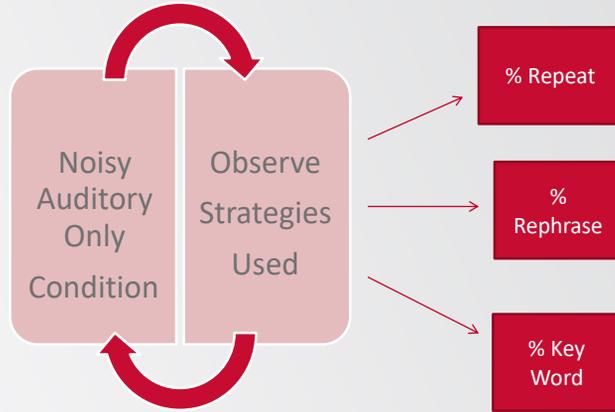
Observations

Speech Reading Assessment in Noise



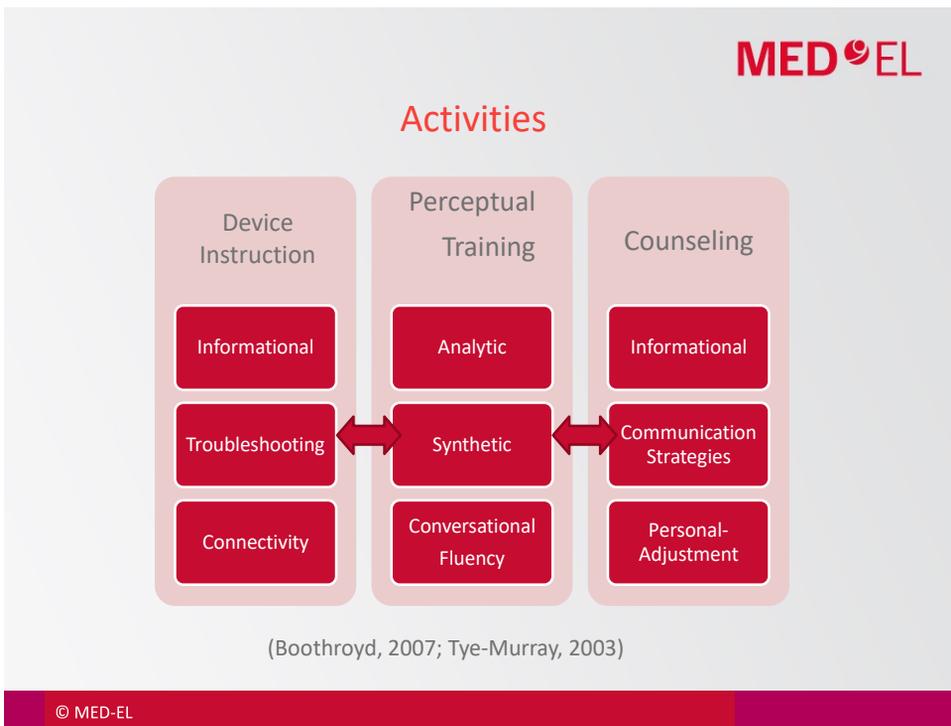
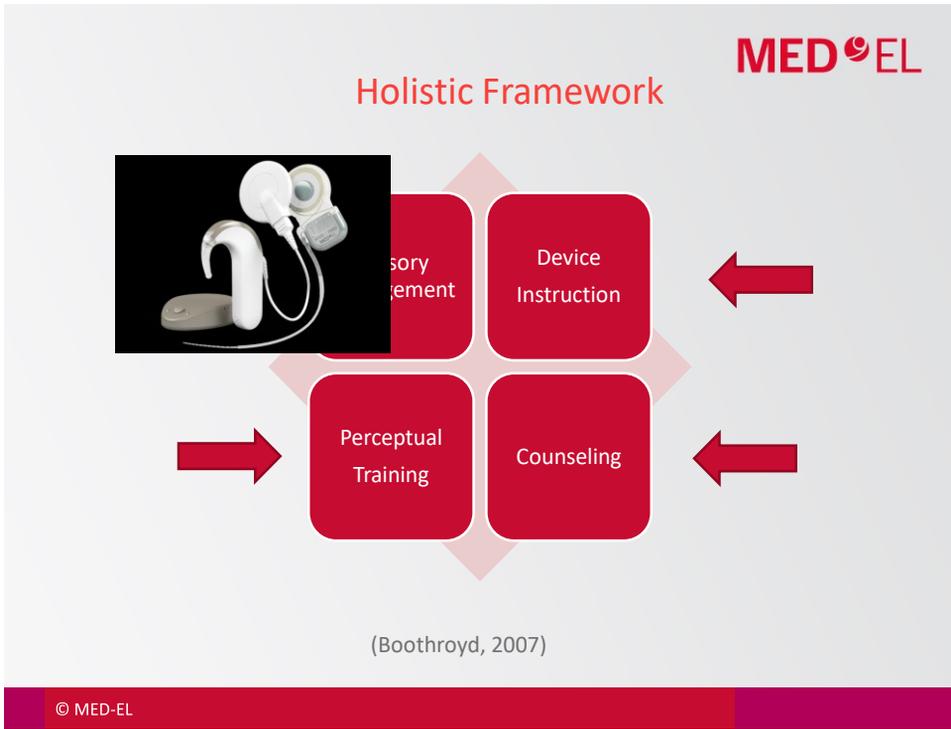
Observations

Auditory-Only Speech Identification in Noise

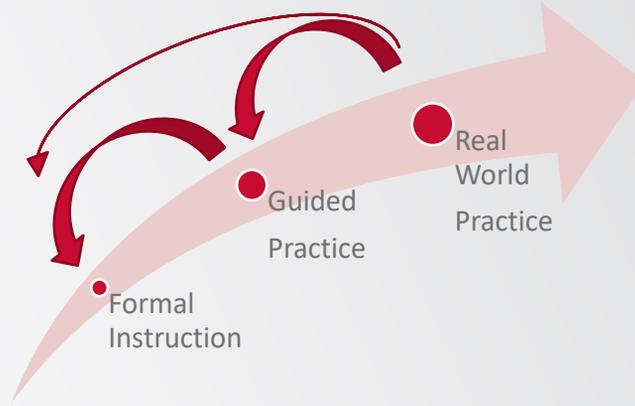


Developing Plans





Delivery of Services



(Witt, 1997)

Device Instruction

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Device Instruction

Informational

Troubleshooting

Connectivity

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(Bennet et al 2015)

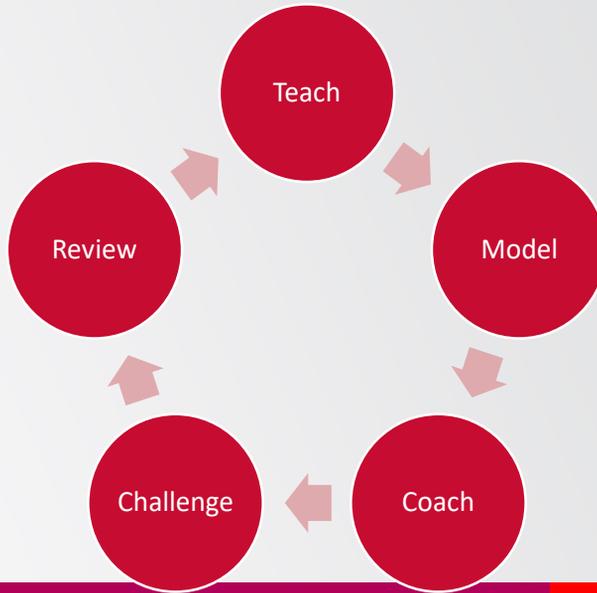
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Device Instruction: Materials



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Device Instruction:



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Device Instruction: Real World Practice



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Two Types
Perceptual Training

(McClatchie & Therres, 2003, Tye Murray, 2014, Fu & Galvin, 2007)

Perceptual Training

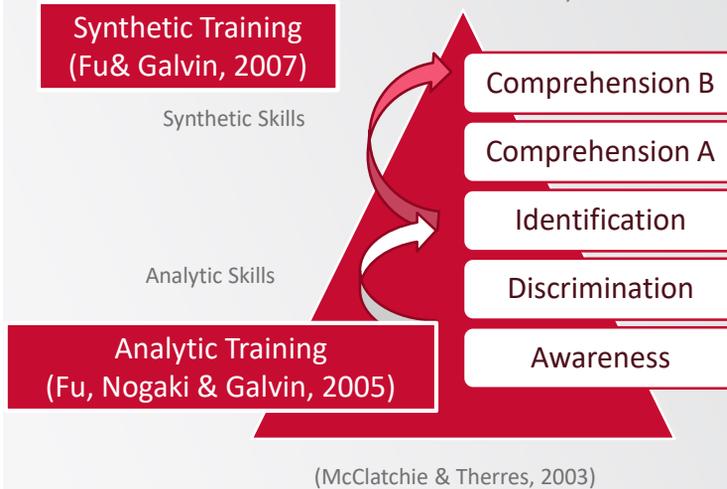
Analytic Training

Synthetic Training

Conversational Fluency

Bottom up Perceptual Training

Conversational Fluency



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Analytic Examples

whom

hot

hood

hip

heat

ham

Analytic Training
(Fu, Nogaki & Galvin, 2005)

A-B-X

Heat vs. hoof

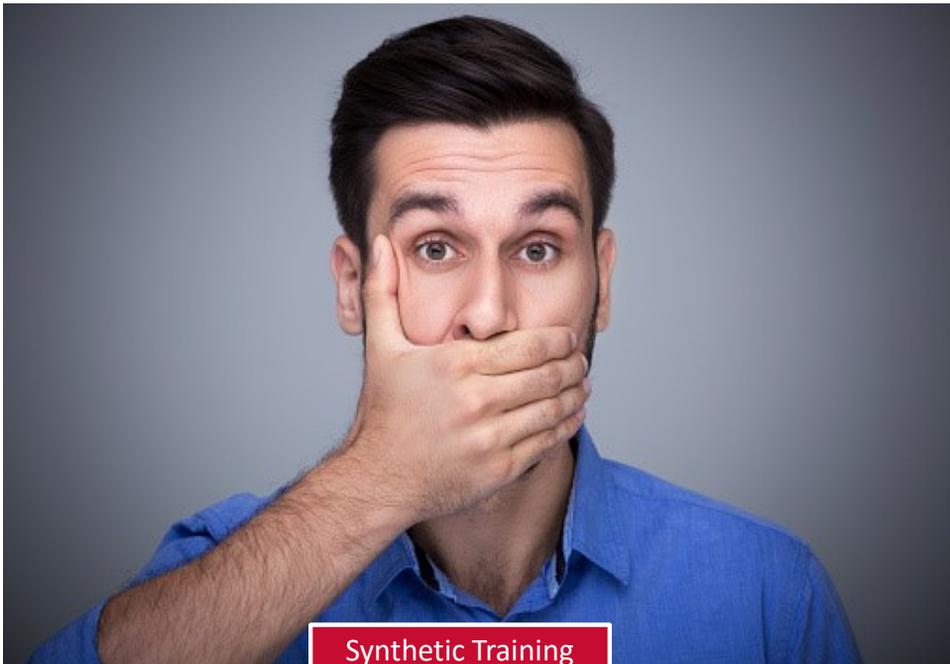
Sand vs. Sam

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Top Down Perceptual Training

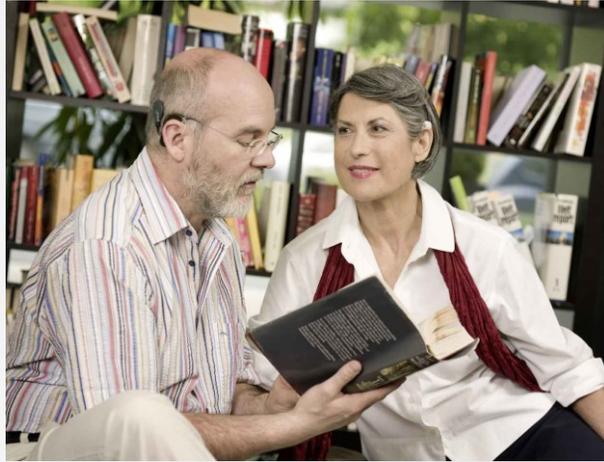


(Fu & Galvin, 2007)



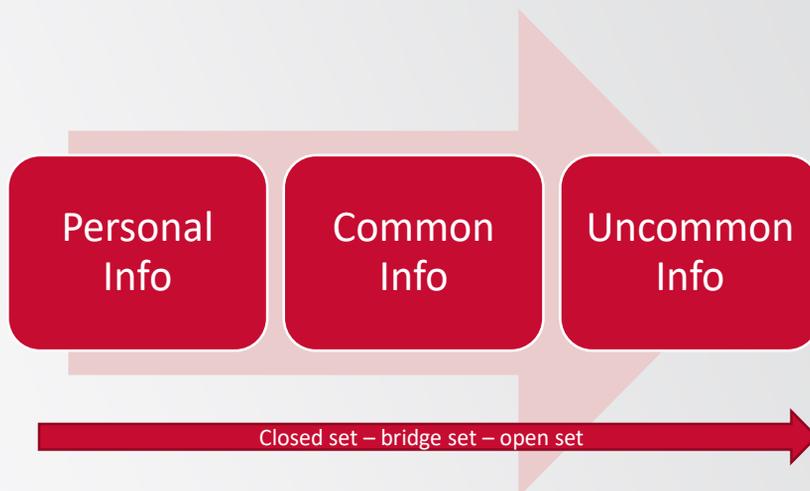
Synthetic Training
(Fu & Galvin, 2007)

Synthetic Training: Speech Tracking



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Top Down & Bottom up Perceptual Training



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Perceptual Training

EasierHarder

Closed Set

Stimulus Set

Open

Words

Stimulus Unit

Complete Sentences

Dissimilar

Stimulus Similarity

Similar

High

Context

Low

Structured

Task

Spontaneous

Good

Signal-to-Noise Ratio

Poor

(Tye-Murray, 2014)

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Perceptual Training

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Direct Audio Input

Live Voice:

Familiar Voices vs Unfamiliar voices



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Perceptual Training

Computer Devices



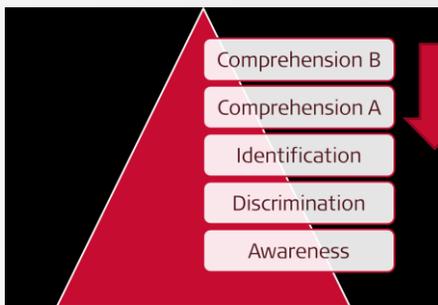
Telephone



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How the Training is Completed Matters

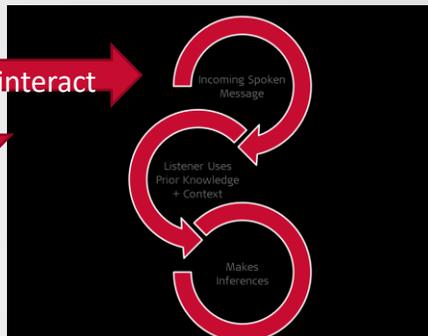
Bottom Up



Analytic

(Fu & Galvin, 2007)

Top Down



Synthetic

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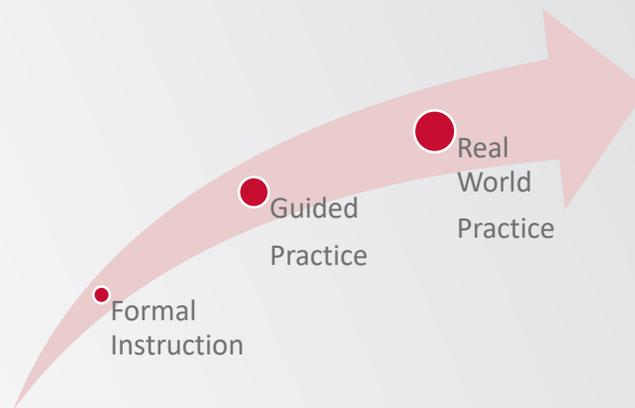
Conversational Fluency

Clear Speech

Repair Strategies

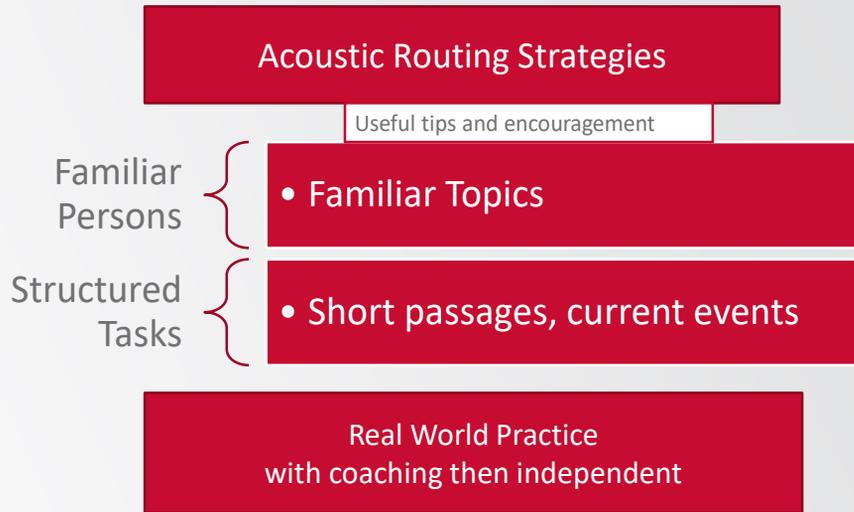
FCP Training

Conversational Fluency



(Witt, 1997)

Telephone Training



Adult Aural Rehabilitation

WHO PAYS?**WHAT'S THE TIME COMMITMENT?**






3-6-12 mths

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Depending on a Variety of Factors, Continued Improvements May be Seen

2 year post
&
5 year post

In the older adult

© MED-EL (Holden et al, 2013; Dillon, 2013)



Perceptual Training Resources



Auditrain: USB



Syntrain: USB

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www.medel-bridge.com

BRIDGE REHABILITATION *Online Store*



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www.medel-bridge.com

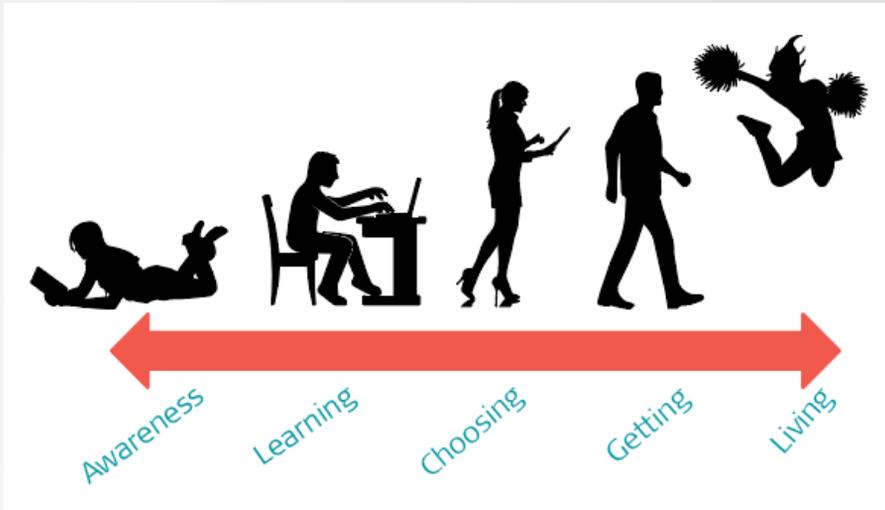
Adult Aural Rehabilitation
Counseling

Types of Counseling

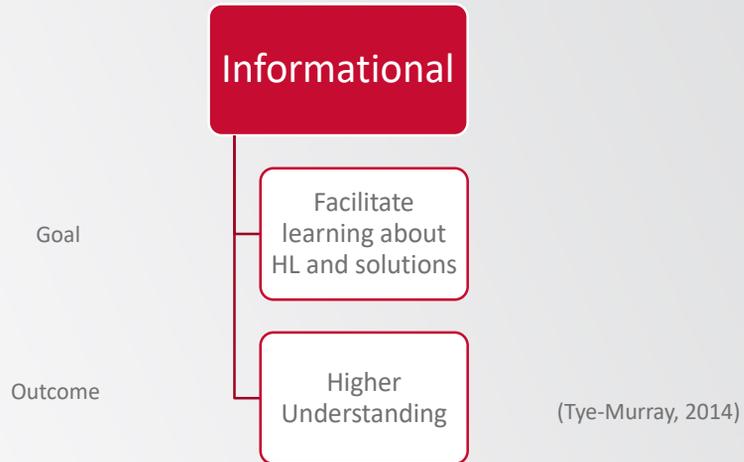
Informational

Assertiveness
Training

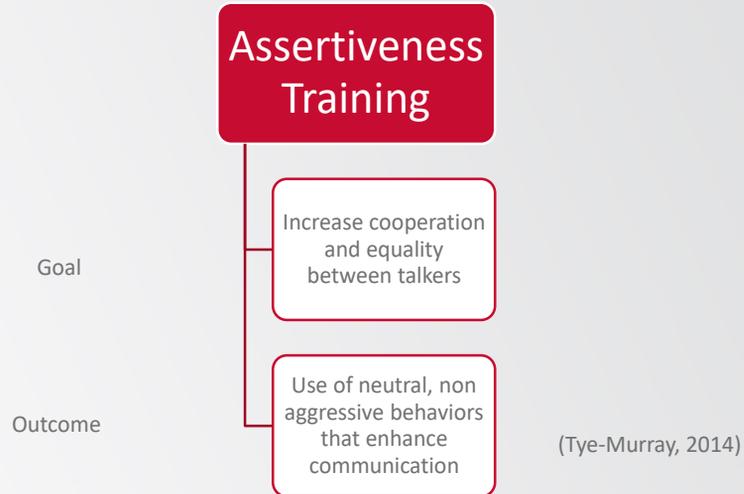
Personal
Adjustment



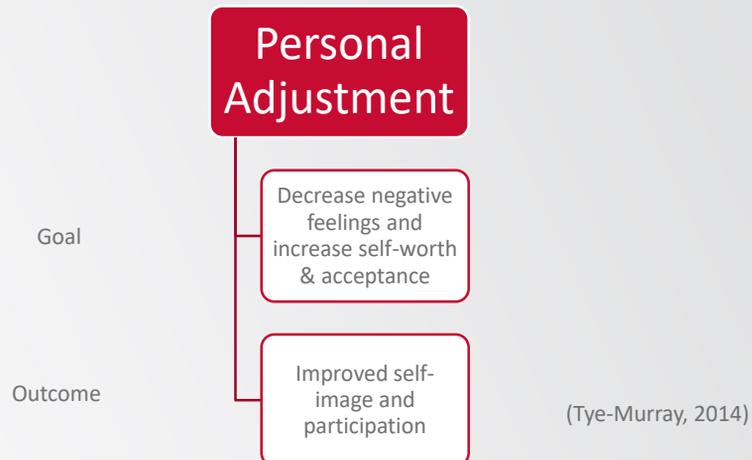
Informational



Assertiveness Training

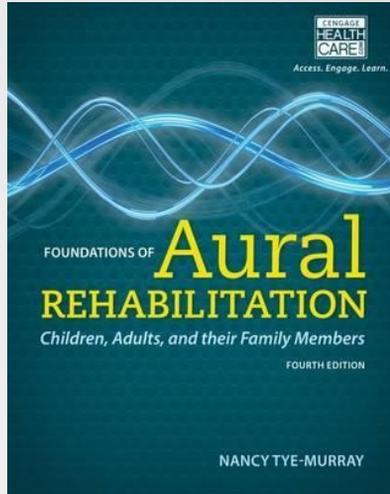


Personal Adjustment





Resource for Professionals



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Efficacy
Adult Aural Rehabilitation

Evidence for a Holistic Approach



Goal	Function	Activity	Participation	Quality of Life
Sensory Management	*	*	*?	*?
Device Instruction	*	*	?	?
Perceptual Training	X	*?	?	?
Counseling	X	X	*	*
HOLISTIC	*	*	*	*

(Boothroyd, 2007; Tye-Murray, 2014)

In review...

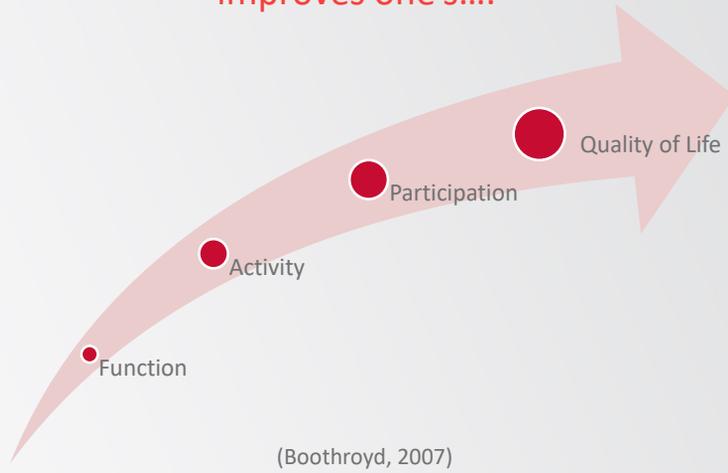
Holistic Framework



(Boothroyd, 2007)



Holistic Framework of Aural Rehab improves one's....

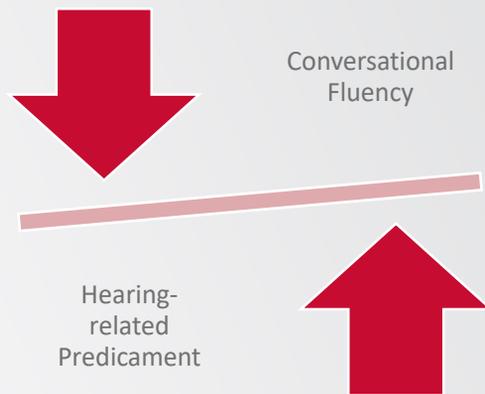


(Boothroyd, 2007)

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Goal Of Aural Rehabilitation



(Tye-Murray, 2003; 2014)

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Adult Rehabilitation
Challenges



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Challenges



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Challenges



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Challenges



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Challenges



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Challenges



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Adult Rehabilitation

Practical Solutions

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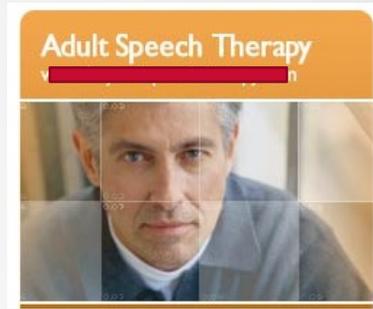
Practical Solutions

Involve other Disciplines

Demonstrate Compensatory Resources

Cultivate Community Partnerships

Involve other Disciplines



Involve other Disciplines

- Informational Counseling
- Device Instruction
- Perceptual Training
- Communication Strategy Training

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Demonstrate Compensatory Resources



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clear™

Customized Learning Exercises for Aural Rehabilitation

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Demonstrate Compensatory Resources

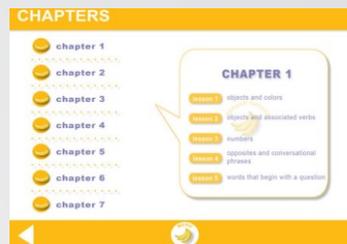


<http://www.medel.com/us/soundscape/>

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Demonstrate Compensatory Resources



Speech Banana



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Demonstrate Compensatory Resources



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BRIDGE REHABILITATION
Online Store

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Now Open

medel-bridge.com

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The advertisement features a laptop displaying the 'Educator Resources Online Store' website. The website has a red header with the MED-EL logo and a navigation menu with buttons for 'HOME', 'TEEN', 'ADULT', and 'RESOURCES'. The main content area includes a welcome message and a 'BRIDGE' logo. In the background, there are four colorful shopping bags (green, orange, pink, and light green) with circular patterns. A 'Now Open' sign is in the bottom left, and the website URL 'medel-bridge.com' is in a white box at the bottom center.



Demonstrate Compensatory Resources

Set Goals.



Hear Now

Practice Alone



Listening Up

Practice with a partner.



Hear at Home

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Cultivate Community Partnerships

Host space for industry sponsored events

Host meeting with local HLAA Chapter

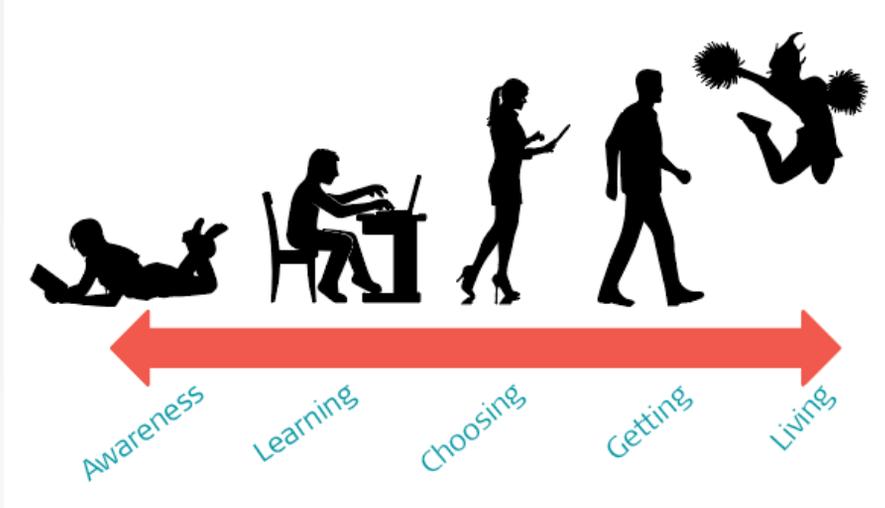
Host party with local AG Bell Chapter

Partner with University SLP student clinics

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Cultivate Community Partnerships



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HANDS ON HEARING
WORKSHOP
FOR MED-EL USERS & CANDIDATES

EXPAND your hearing experiences with assistive listening technology

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MED-EL Meet Up - Indianapolis

hearLIFE

medel.com



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Case Example

Case Example

“We really don’t have any money in our budget for extra staff or materials. We do have a few patients who are struggling with speech perception; especially in noise and on the telephone. I’ve done everything possible with their CI maps, even had my rep come out to verify everything with me. We’ve given our patients brochures on what they can do, and have had some discussions, but that doesn’t seem to be very satisfying or completely helpful. My schedule is booked with device fittings and evaluations. I’d just like to find a way to get my patients the help they need.”

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Objectives

Reviewed Framework of Assessment

Reviewed Framework of Adult Aural Rehab

Offered Practical Solutions

Discussed Solutions for a Case Example

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Adult Aural Rehabilitation
Reflect

Reflect: Call to Action

What are you currently doing?	What will you try now?	Other Questions?	What will you do to find out?
Sensory Management And Device Instruction	Encourage and demonstrate home Practice. Find other Disciplines to Partner with or Refer to	How to start Group Sessions	Contract Industry Reps Contact Local University

Final Considerations

Patients predicaments change over time, so the aural rehabilitation plan must be fine-tuned and adjusted as it unfolds.

Final Considerations

  West AK, CA, HI, IL, MT, NV, OR, UT, WA, WY	  Southwest AR, AZ, CO, LA, NM, OK, TX	  Midwest IA, IL, IN, KS, KY, MI, MN, MO, NE, ND, OH, SD, WI
  Northeast CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV	  Southeast AL, FL, GA, MS, NC, SC, TN	

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Thank you!