

Aural (Re)habilitation For Adolescents

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Aural (Re)habilitation Definition

- Adult aural rehabilitation
 - “The reduction of hearing-loss-induced deficits of function, activity, participation, and quality of life through sensory management, instruction, perceptual training, and counseling” (Boothroyd, 2007, p. 63)

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Aural (Re)habilitation Definition

- Aural rehabilitation
 - “...as any device, procedure, information, interaction, or therapy which lessens the communicative, psychosocial, and economic consequences of a hearing loss” (Ross, 2007, p 32)

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Adolescence

- Generally considered the second decade of life
- Begins with the onset of puberty and finish around 19 years of age

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Adolescence

- Major transformations in a short time in many domains
 - Body
 - Mind
 - Ability
 - Relationships (Steiner, 1996, p. xiii)

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Adolescence

- Forewarning
 - **Unconditional positive regard** will maximise learning opportunities (Gelard & Gelard, 2004)

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Adolescence

- Build authentic and honest rapport
 - Continuously re-establish rapport
 - Do not rush rapport building process

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Adolescence

- Onset of puberty creates challenges
 - Developmental changes
 - Complicated interactions
 - Family
 - School
 - Peer
 - Community contexts

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Adolescence

- Family and Peers
 - Adolescents perceive parents, especially mothers, and peers as the most significant individuals in their lives (Meeus, Oosterwegel & Vollebergh, 2002)

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Adolescence

- Family and Peers
 - Parents influence adolescent's future
 - Peers influence adolescent's current and immediate life situations (Meeus, Oosterwegel & Vollebergh, 2002)

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Adolescence

- Family and Peers
 - Adolescents endeavour to temporarily distance themselves from parents
 - Peer relations increase in importance and intensity (Ohannessian & Lerner, 1994)

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Adolescence

- Importance of peers
 - Peers facilitate developmental milestones for adolescents
 - Attachment
 - Sympathy
 - Empathy (Ohannessian & Lerner, 1994)

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Mythical Average

- Society is exposed to the idea of the 'average household', the 'average car', the 'average income', the 'average Australian' etc
 - In reality, no such average exists (Lefrancois,1990)

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Mythical Average

- No average child
- No average adolescent
- No average adult (Lefrancois,1990)

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Mythical Average

- The concept of average
 - Convenient invention
 - Necessary creation
 - Used to speak coherently of those aspects of human development that are important and most general (Lefrancois,1990)

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Mythical Average

- Individual essence of each person is not addressed in theories of human development
 - Each person is unique
 - Each differs from the average in many ways (Lefrancois,1990)

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Application

- By understanding broad notions of adolescent development and theories of human development, the specialist can plan and implement developmentally appropriate practices

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Application

- Many approaches to human development will assist in understanding adolescents - including
 - Cognitive approach (Piaget)
 - Psychosocial approach (Erikson)
 - Humanistic approach (Maslow)

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Cognitive Approach

- Among other things, it looks at how people understand, diagnose, and solve problems
 - Mental processes which mediate between stimulus and response

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Cognitive Approach

- Piaget believed
 - People organise and store material in different ways as a result of maturation
 - These changes occur through the active involvement with the environment (Owens, 1996)

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Cognitive Approach

- Piaget believed
 - A mental structure is a relationship or series of relationships between parts as they are organized into a whole
 - A young child maintains cognitive structures called schemata (Owens, 1996)

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Cognitive Approach

- Piaget believed
 - A schema is an organized pattern of behaviour that implies a particular mental organization
 - Schemata become more complex and sophisticated as development occurs (Owens, 1996)

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Cognitive Approach

- Piaget's Formal Operational Stage
 - 11 Years and up
 - Characteristics
 - Thinking logically about abstract propositions and testing hypotheses systematically (if then)
 - Becoming concerned with the hypothetical, the future, and ideological problems

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Application

- Depending on **life experiences**, some adolescents may have an internal representation of the world that is not 'age equivalent'
- The specialist can use the structured context to build more sophisticated schemata

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Psychosocial Approach

- Erikson developed the theory that social forces influence the child's development
 - A series of crises occurs in response to demands society places on the developing child
 - Each stage of psychosocial development builds upon, and incorporates, the outcome of earlier stages (Erikson, 1968)

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Psychosocial Approach

Erik Erikson's Eight Stages of Psychosocial Development Summary (Stage Five)				
Stage	Ages	Basic Conflict	Important Event	Summary
Adolescence	12 to 18 years	Identity vs. Role Confusion	Peer Relationships	The teenager must achieve a sense of identity in every aspect of their lives including gender roles, peer attachment and religion

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Psychosocial Approach

- Adolescent is concerned with how they appear to others
- Ego identity is the accrued confidence that the inner sameness is matched by peer perception
- Adolescents who fail in the search for an identity may experience self-doubt and role confusion
- Main question asked, "Who am I, and what is my goal in life?"

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Application

- Specialist working with the adolescent must be aware of the potential ongoing internal struggle for identity
- Adolescent identity may change depending on the social context

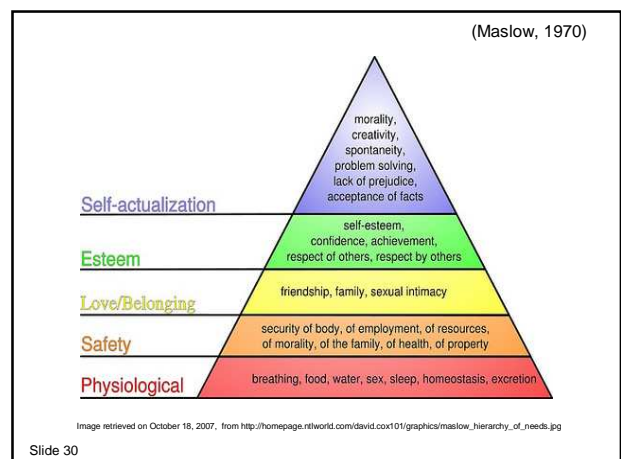
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Humanistic Approach

- Maslow set up a hierarchical theory of needs
 - Basic needs are at the bottom, and the needs concerned with a person's highest potential are at the top
 - Each level of the pyramid is dependent on the previous level (Maslow, 1970)

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Application

- It is important for the specialist to be aware of the hierarchy of needs
- If, for example, an adolescent is being bullied at high school, it may be unrealistic for the specialist to expect that the adolescent will have the capacity to concentrate on high level tasks

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Psychological Construct

- Psychosocial constructs that help understand adolescents
 - Locus of control
 - Identity and self-esteem
 - Egocentrism
 - Theory of mind

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Psychological Construct

- **Locus Of Control**
 - The locus (meaning place) of control is a concept in psychology developed by Julian Rotter in the mid 1950s (Rotter, 1975)
 - People tend to ascribe their chances of future successes or failures either to internal or external causes (Lefrancois, 1994)

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Psychological Construct

- **Locus Of Control**
 - Beliefs about outcomes
 - Contingent on what we do (internal control orientation)
 - Contingent on events outside our personal control (external control orientation) (Lefrancois, 1994)

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Psychological Construct

- **Locus Of Control**
 - Persons with an internal locus of control see **themselves** as responsible for the outcomes of their actions (Mamlin, Harris & Case, 2001)
 - Locus of Control Survey - <http://www.dushkin.com/connectext/psy/ch11/survey11.mhtml>

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Psychological Construct

- **Locus of Control**
 - Statements Of **Internal Locus Of Control**
 - I couldn't hear very well in class today. I think my MAP isn't working, so I asked Mum to make an audiology appointment.
 - I won the debating championship because I practiced every day for six months.
 - I have to study every night this week or I will not do well on my exams.

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Psychological Construct

□ Locus Of Control

- Persons with an external locus of control see **others** as responsible for the outcomes of their own actions
- These individuals often see luck rather than effort, as determining whether they succeed or fail (Mamlin, Harris & Case, 2001)

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Psychological Construct

□ Locus of Control

- Statements Of **External Locus Of Control**
 - I couldn't write notes in class today because I had flat batteries because my Mum forgot to give me extra ones.
 - I didn't eat lunch today because my Dad didn't give me any money.
 - I failed my history because I couldn't hear the teacher.

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Application

- Development of a strong internal locus of control includes manipulation of the situation
 - Assistive listening technology
 - Acoustic environment
 - Socialisation skills
 - Functional prosody
 - Speech intelligibility

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Application

□ Locus of Control Scenario (Task)

- You need to do your history homework during lunch, but you decided to do something else. When you get to your history class you blame it on the fact that your Mum and Dad made you go out for dinner the night before. You are angry.
 - Q. Is this internal or external locus of control?
 - Q. Is this appropriate behaviour?

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Application

□ Locus of Control Scenario (Task)

- You buy a meat pie from the Tuck Shop and it falls out of the bag. You blame the tuck shop lady for putting the pie in a ripped bag. You get upset and are grumpy for the rest of the day.
 - Q. Is this internal or external locus of control?
 - Q. What could you do differently?

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Application

□ Locus of Control Scenario (Task)

- Your friend in Tech class cuts her finger on a sharp saw. She begins running around the class screaming. Then she blames her friend for talking to her while she was trying to work.
 - Is this internal or external locus of control?
 - What should you do?

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Psychological Construct

□ Identity And Self-esteem

- Self-esteem or self-worth is a person's self-image at an emotional level
 - Circumventing reason and logic
- One can remain highly egotistical, while underneath have very low self-esteem

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Psychological Construct

□ Identity And Self-esteem

- Strong correlation between high-identity and strong self-esteem (Marcia, 1980)
- For adolescents, the worst ego experience (identity) is not failure, but uncertainty about themselves, especially in relation to their peers (Josselson, 1980)

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Psychological Construct

□ Egocentrism

- **Imaginary audience** is an imagined collection of people assumed to be highly concerned about the adolescent's immediate behaviour (Elkind, 1967)

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Psychological Construct

□ Egocentrism

- **Personal fable** is a type of elaborated fantasy whose themes stress the individual's invulnerability and uniqueness (Elkind, 1967)

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Application

□ Self-Esteem Scenario (Task)

- You are at a party and you have on your new sweatshirt. Someone spills coke on it. You hear someone laughing.
 - What does that mean?
 - How do you feel?
 - What will you do?
 - What do you think other kids at the party will think or say?

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Application

□ Self-Esteem Scenario (Task)

- You are in PE and you have on your brother's old gym shoes. They have holes in them and are obviously very old shoes. You hear someone say "Cool shoes."
 - What does that mean?
 - How do you feel?
 - What should you say?
 - What will you do?

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Application

- **Self-Esteem Questions (Task)**
 - Tell me three things you do well?
 - Tell me four reasons why someone would want to be your friend?
 - Tell me five characteristics you like in your friends?

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Psychological Construct

- **Theory Of Mind**
 - The awareness in an individual of human behaviour as ruled by a complex system of mutual states, involving feelings, beliefs and desires (Berger, 1994)

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Psychological Construct

- **Theory Of Mind**
 - Theory of Mind is a concept that can help specialists understand how students think about their state of mind and that of others involved in various life situations (Berger, 1994)

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Psychological Construct

- **Theory Of Mind**
 - Theory of Mind is concerned with how people understand and are aware of consciousness and mental acts of others (Berger, 1994)
 - Theory of mind can be called “perspective taking”

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Application

- Through the use of scenarios, the specialist can structure a context to allow the adolescent practice at identifying authentic mental states of others

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Application

- **Perspective Taking Scenario (Task)**
 - While Adam was playing football in his garden, he kicked the ball into his neighbour's garden.
 - What might Adam think?
 - What might his neighbour think?
 - What might Adam do that is acceptable?
 - What might Adam do that is unacceptable?

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Application

□ Perspective Taking Scenario (Task)

- Sarah hears a girls from school say she wanted a chocolate ice-cream cone. The girls asks the clerk in the shop for two scoops of chocolate, but she says they are out. The girls swears at the shopkeeper.
 - Why did Sarah's friend do what she did?
 - What might Sarah think?
 - What might Sarah do that is acceptable?
 - What might Sarah do that is unacceptable?

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Psychological Construct

- Empathy
 - The response to the emotional cues of other people and their situations
 - Includes acting on the understanding to benefit the other (Owens, 2002)

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Social Competence

□ The Challenge

- The adolescent has to establish and maintain competent social interactions during times of chaotic developmental changes (Hansen, Nangle, Meyer & 1998)

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Social Competence

□ Interference

- Issues can interfere with effective social skills intervention
 - Family problems
 - Negative peer influence
 - Conduct problems
 - Substance abuse problems
 - Limited cognitive abilities

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Social Competence

□ Social Validity

- Social validity refers to the acceptability and viability of the goals, procedures, and outcomes of therapy (Hansen, Nangle, Meyer, 1998)

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Social Competence

□ Social Validity

- When the goals are not socially valid to the adolescent, the likelihood of treatment adherence will be decreased (Hansen, Nangle, Meyer, 1998)

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Social Competence

- **Enhance Social Validity**
 - Considering the adolescent's goals
 - Adolescent is more likely to be satisfied with the results of therapy when treatment is targeted toward areas of their lives they deem as important (Hansen, Nangle & Meyer, 1998)

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Application

- The selection of target behaviours that are related to successful interpersonal interactions is an important part of intervention
 - Goals must be socially valid
 - Tasks must be authentic

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Application

- **Generalisation**
 - Teachers/therapists should not be treating generalisation as a passive phenomenon where we "train and hope" that generalisation will occur (Stokes & Baer, 1977)

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Application

- **Generalisation**
 - Specialists need to actively program for generalisation of treatment effects (Stokes & Baer, 1977)

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Application

- Social skills training can include
 - Assessing situational characteristics
 - Assessing tasks demands
 - Assessing personal attributes
 - Maintaining self-confidence
 - Predicting outcomes
 - Monitoring success through self-regulation

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Social Competence

- **Self-Regulation**
 - Through the process of therapy, the specialist must remember to facilitate self-regulation and internal locus of control
 - This is especially true for social skills training

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Application

□ Tasks

- Expose the student to a variety of scenarios
- Discuss the consequence of social behaviours
- Provide interpersonal feedback (direct and indirect)
- Maximise the meta-cognition associated with socialisation skills
- Exploit ongoing contextual situations

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Application

□ Social Competence Scenario (Task)

- You lent your swim goggles to a friend a long time ago. You want to ask for them back so you can use them this afternoon.
 - What do you do and say?

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Application

□ Social Competence Scenario (Task)

- You always eat lunch with one particular friend. You told him (her) that you would buy food from the canteen tomorrow, but when you see what's on the menu you don't like it. You decide not to eat from the canteen with your friend.
 - What do you say and do?

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Application

□ Social Competence Scenario (Task)

- Three friends are in a small group talking about something that happened at the weekend to one of the kids in school. You are not sure what they are talking about, but you are interested in joining in on the conversation.
 - What is the best way of doing this?

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Planning Framework

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Key to Planning

- The key to planning is integrating linguistic, auditory, cognitive and social skills
- **No single pedagogical domain should be considered in isolation (Duncan, 2006)**

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Evidence Based Practice

- Skilled specialists
 - Observe and identify a student's Zone of Proximal Development
 - Design appropriate **authentic** and meaningful learning tasks
 - Provide instructional support and scaffolding to facilitate higher level understanding

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Evidence Based Practice

- The specialist must make use of current best evidence in making decisions regarding
 - Planning intervention
 - Conducting intervention
 - Deciding placement options

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Evidence Based Practice

- Decisions regarding intervention and/or interactions should be both qualitative and quantitative in nature (Vygotsky, 1962)
- Effective specialists use a combination of informal observation (qualitative) as well as standardised assessments (quantitative)

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Evidence Based Practice

- Evidenced based intervention includes
 - Functional diagnostic teaching
 - Observation
 - Comprehensive standardised assessment

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Evidence Based Practice

- Development is influenced by both **heredity (nature)** and **environment (nurture)** (Lefrancois, 1999)
- Although little can be done to change heredity, much of the environment can be controlled and manipulated (Lefrancois, 1999)

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Evidence Based Practice

- The goal of the specialist is to structure a context (**environment**) and use specific teaching behaviours so that adolescents can learn and rehearse skills necessary for the successful mainstream experience (Duncan, 2006)

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Teaching Behaviours

- Recognises predictable sequence of child development
- Follows the hierarchy of natural developmental patterns
- Uses an integrated approach to teaching auditory, speech, language, cognitive and social skills
 - See Duncan (2006) for additional specific teaching behaviours

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Planning Framework

- Duncan (2001, 2003, 2005, 2006) along with Duncan and Dodson (2002) describe a three or four stage layering system used in lesson planning in an effort to maximise learning

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Planning Framework

- Constructivism underpins the framework
 - Social interaction is the centre of human activities
 - By definition, a framework is a basic structure, arrangement, or system and is **skeletal in nature**

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Planning Framework

- **Layer One - Linguistic Skills**
 - Establish baseline linguistic skill
 - Informal observation to determine functional communication
 - Formal standardised assessment to determine explicit strengths and weaknesses

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Planning Framework

- **Layer Two – Auditory Skills**
 - Uses four basic types of **auditory response** that contributes to the perception of speech (Hirsh, 1966; Erber, 1979, 1982)

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Planning Framework

- **Layer Two – Auditory Skills**
 - **Auditory detection** is the ability to respond differently to the presence and absence of a speech stimuli (Hirsh, 1966; Erber, 1979, 1982)
 - **Auditory discrimination** is the ability to perceive similarities and differences among two or more speech stimuli (Hirsh, 1966; Erber, 1979, 1982)

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Planning Framework

- **Layer Two – Auditory Skills**
 - **Auditory identification** is the ability to reproduce speech stimuli by naming or labelling it (Hirsh, 1966; Erber, 1979, 1982)
 - **Auditory comprehension** is the ability to understand the meaning of speech stimuli (Hirsh, 1966; Erber, 1979, 1982)

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Planning Framework

- **Layer Two – Auditory Skills**
 - Determine which auditory skill suits the linguistic target from layer one and apply it to the task

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Planning Framework

- **Layer Two – Auditory Skills**
 - Incorporate the notion of auditory practice concurrently at the word, sentence and discourse level (Romanik, 1990)

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Planning Framework

- **Layer Two – Auditory Skills**
 - Word level
 - Listening to one word
 - Working towards an open set
 - Identifying it by repeating it
 - Processing a meta-cognitive or meta-linguistic task

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Application

- Word Level (Task)
 - Repeat the word and provide an antonym and synonym
 - Anger
 - Dehydrate
 - Achieve
 - Bankrupt

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Planning Framework

- **Layer Two – Auditory Skills**
 - Sentence level
 - Listening to a sentence
 - Working towards an open set
 - Identifying it by repeating it
 - Processing a meta-cognitive or meta-linguistic task

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Application

- Sentence Level (Task)
 - Repeat the sentence and identify the idiom
 - My friend sometimes works for three weeks at a stretch
 - The company decided to protect their market share at all costs

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Planning Framework

- Layer Two – Auditory Skills
 - Discourse level
 - Listening to the discourse
 - Working towards an open set
 - Identifying it by repeating it
 - Processing a meta-cognitive or meta-linguistic task

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Application

- Discourse Level (Task)
 - Repeat the discourse and define the last words
 - Don't listen to what she said because it was untrue. Dismissed it as mere conjecture.
 - Succeeding in high school is hard work. It takes persistence.

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Imitation of Auditory Stimulus

- Two reasons for direct imitation
 - Determine what the child hears and make an informal diagnosis of functional speech perception
 - Provides opportunity to process complex meta-cognitive and meta-linguistic skills

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Planning Framework

- Layer Three – Cognitive Skills
 - Bloom's Taxonomy of Cognitive Processes (1956) is a helpful framework
 - Six levels
 - Knowledge
 - Comprehension
 - Application
 - Analysis
 - Synthesis
 - Evaluation

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Planning Framework

- Layer Three – Cognitive Skills
 - Bloom's Taxonomy provides the practitioner with a clear and comprehensive pathway for programming, implementing and evaluating targets through the cognitive domain (Duncan, 2003, 2005, 2006; Duncan & Dodson, 2002)

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Planning Framework

- **Layer Three – Cognitive Skills**
 - Use the taxonomy to ensure that a range of cognitive tasks are included in each session
 - Again, the cognitive target is applied to the original linguistic and auditory task

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Cognitive Layer

Knowledge	•to recall factual information
Comprehension	•to show an understanding of information
Application	•use some previously learned knowledge, rule or method in a new situation
Analysis	•to break information into parts to explore understandings and relationships
Synthesis	•to put together ideas in a new way to develop a new or unique product

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Planning Framework

- **Layer Four – Social or Psychosocial Skills**
 - The fourth layer is optional in planning and is the application of social or psychosocial skills including
 - Social
 - Communicative intentions
 - Psychosocial
 - Locus of control
 - Enhancement of self-esteem
 - Perspective taking
 - Development of empathy

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Meta-Cognition

- **Facilitating Meta-cognition**
 - Best learners possess strategic as well as domain specific (content) knowledge (Lefrancois, 1994)
 - Teaching this strategic knowledge is critical (Lefrancois, 1994)

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Meta-Cognition

Facilitating Meta-cognition

- Includes
 - How to think
 - How to solve problems
 - How to learn and memorize
 - How to understand
 - How to monitor one's own thinking
 - How to evaluate the learning process (Lefrancois, 1994)

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Meta-Cognition

Facilitating Meta-cognition

- Explicit formal and informal teaching of the **vocabulary of thinking and learning**
 - Students develop a repertoire of useful thinking strategies for assisting in the learning process

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Meta-Cognition

Facilitating Meta-cognition

- Weinstein and Mayer (1986) describe a series of categories of learning/thinking strategies that can be applied to aural (re)habilitation

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Meta-Cognition

Facilitating Meta-cognition

- Rehearsal strategies
 - Simple repetition
 - Highlighting important facts
- Elaboration strategies
 - Formulating mental images
 - Forming analogies
 - Paraphrasing (Weinstein & Mayer, 1986)

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Meta-Cognition

Facilitating Meta-cognition

- Organisational strategies
 - Grouping
 - Classifying
 - Identifying main ideas (Weinstein & Mayer, 1986)

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Meta-Cognition

Facilitating Meta-cognition

- Monitoring strategies
 - Self-questioning
 - Reciting main points
- Affective or motivational strategies
 - Working towards a good grade
 - Positive thinking (Weinstein & Mayer, 1986)

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Application

- Adolescents must be aware of a diverse range of thinking skills
- Adolescents can learn to control cognitive processes
- Specialists discuss learning processes and strategies with the adolescent throughout each session

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Case Study: Alana

- 16 years old, diagnosed at nine months with a profound hearing impairment due to common cavity malformation, and received a cochlear implant at two years
- Parents chose the auditory-verbal methodology
 - <http://www.agbellacademy.org/>

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Case Study: Alana

- Family participated in local, consistent auditory-verbal therapy from a Certified Auditory-Verbal Therapist throughout early childhood
- Auditory-verbal therapy ceased when the child entered formal schooling and
- Auditory-verbal therapy recommenced when the student was 14 years and enrolled in RIDBC's International Teleschool Pilot Program

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Case Study: Alana

- Between February 2006 and October 2007, the family participated in 55 auditory-verbal therapy sessions via videoconference
- Student was at home in Taipei, Taiwan and the therapist was at RIDBC in Sydney, Australia
- Student is bilingual (English and Mandarin)
 - Student's first language is English and therapy was conducted in English

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Case Study: Alana

- Each videoconference session lasted 60 minutes
- Parent received each lesson plan 24 hours before the session
- A 34K ADSL dedicated videoconference connection was used for all auditory-verbal sessions

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Case Study: Alana

- A three layer lesson plan framework (Duncan, 2006) was used with the student
 - It comprised a linguistic, auditory and cognitive goal layered onto each task within the videoconference auditory-verbal therapy

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Case Study: Alana

- Before commencing auditory-verbal videoconferencing, the Comprehensive Assessment of Spoken Language (CASL) (Carrow-Woolfolk, 1999) was administered to the student in early 2006 to assist in selecting short and long term goals and again in early 2007 after 12 months of therapy to measure progress and to set new short and long term goals

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CASL Test	Standard Score 2006	Standard Score 2007
Antonyms	104	97 (down)
Synonyms	96	105 (up)
Sentence Completion	102	102 (same)
Idiomatic Language	70	69 (down)
Syntax Construction	118	109 (down)
Grammatical Morphemes	103	112 (up)
Sentence Comprehension of Syntax	121	118 (down)
Grammaticality Judgment	102	117 (up)
Non-literal Language	97	104 (up)
Meaning from Context	99	103 (up)
Inference	94	98 (up)
Ambiguous Sentences	116	98 (down)
Pragmatic Judgment	127	112 (down)

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Case Study: Alana

- The student reports
 - Aural (re)habilitation has had a positive affect outside of the therapy context
 - Strategies and techniques used to decipher the auditory stimulus were used regularly in the classroom and application of the meta-cognitive strategies were applied by the student in all school subjects

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Case Study: Alana

- The parent reports
 - A significant benefit in coordinating the audiological care of the student
- Through a combination of a site visit to the student's home and telepractice aural (re)habilitation sessions the therapist was able to determine functional listening skills and make suggestions to the local audiologists regarding MAP changes

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Case Study: Antonio

- Student was diagnosed at 3.2 years as having a severe to profound bilateral hearing loss of unknown aetiology
- Student was fitted with hearing aids at 4.5 years and did not attend preschool
- No other disabilities were present
- English was not the first language of the family

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Case Study: Antonio

- Student wore Siemens BTE and a Solaris Personal FM system
- Student received 1.5 hours of individualised school based intervention with a Cert AVT
- Family decline a cochlear implant for the student

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Antonio Comprehensive Assessment of Spoken Language (CASL)		
<i>*Chronological Age 11y.5m</i>	Test Age Equivalent	Standard Score
Antonyms	10y.6m	94
Synonyms	10y.2m	78
Sentence Completion	8y.7m	81
Idiomatic Language	10y.0m	82
Syntactic Construction	10y.4m	93
Paragraph Comprehension	13y.2m	114
Grammatical Morphemes	13y.4m	79

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<i>*Chronological Age 11y.5m</i>	Test Age Equivalent	Standard Score
Sentence Comprehension	19y.6m	119
Grammaticality Judgement	7y.8m	78
Nonliteral Language	10y.0m	92
Meaning From Context	10y.8m	94
Inference	8y.5m	80
Ambiguous Sentences	8y.4m	87
Pragmatic Judgement	10y.8m	95

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Conclusion

- Even if students with a hearing loss receive appropriate, consistent amplification and early intervention, and even when they have good functional communication skills, many have gaps in complex language, auditory memory and many may experience social isolation (Luterman, 1991, 2004)

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Conclusion

- The psychosocial difficulties facing adolescents with a hearing loss can be significant and it is important that specialists address implications for intervention (Luterman, 2004)

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Conclusion

- As the student progresses through school, it is vital that they become more and more responsible for their own learning as the educational, didactic demands of the school increases

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Conclusion

- With the support of the multidisciplinary team aural (re)habilitation can assist the student in learning complex skills necessary to achieve a successful mainstream experience

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Royal Institute for Deaf and Blind Children

□ **Our values**

- RIDBC is motivated by:
 - A recognition that all children, irrespective of disability, deserve to receive education, training and other services which will enable them to develop their skills and capabilities to the fullest.
 - A quest for quality in the education of children with special needs which arise from impaired vision and/or hearing.
 - The knowledge that a child's parents are the major influences and primary educators in the child's life and may need advice, information and support in fulfilling those roles.
 - A desire to advance practice in the field of the education of children with hearing and/or vision impairment.
 - A belief that educational practice needs continuous evaluation and an underpinning through research.
 - An understanding that teacher effectiveness can be enhanced by professional development.
 - Faith in community support and the concern and generosity of people.

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Royal Institute for Deaf and Blind Children

□ **Our objectives**

- To provide high quality, innovative education to children with impaired vision and/or hearing.
- To offer choices and options in educational approaches and settings.
- To commence the educational process as soon as the diagnosis of significant hearing or vision impairment has been made.
- To provide children's audiological services, including diagnostic audiology.
- To assist parents and families in catering to the special needs of the child.
- To engage in research, information dissemination, professional development and staff training relevant to the education of children with significant vision and/or hearing impairment.
- To have sufficient resources to enable the pursuit of these objectives.

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Royal Institute for Deaf and Blind Children

□ **Our strategies**

- To conduct early education programs in family homes, centres, preschools and by remote delivery.
- To conduct special schools and to support the education of children in regular schools.
- To conduct, in conjunction with a university, a centre for research and professional development, and to publish and disseminate research papers, conduct conferences and seminars and participate in national and international forums.
- To provide ancillary services that are integral to the educational process.
- To effect continuous improvement in educational service provision through program evaluation, external review and assessment, monitoring of consumer satisfaction and staff development.
- To ensure adequate resources are available to support the above activities through fundraising, government funding, investment income and volunteer support, and to make the most cost-effective use of those resources.

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Thank-you!

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