Speech Sound Disorders: Let's Get Practical

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Presented for ISHA
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Part 2
Intervention for Speech Sound Disorders: A Top-10 Approach

K.C. and the Sunshine Band Approach

• GIVE A LITTLE TEST
• DO A LITTLE THERAPY
• GET DOWN TONIGHT!

TOP-10 IDEAS

TERA  PARIS  MORTY

Educational Leaders*
Commonalities

• BEDROCK BELIEFS
• COURAGE: RISK TAKING > LONG HAUL
• A STRONG SOCIAL CONSCIENCE
• A SERIOUSNESS OF PURPOSE
• A VISION FOR EXCELLENCE & CHANGE
• AN ENDURING FAITH IN ALL THINGS POSSIBLE

*K: Leadership in Education: Five Commonalities
Mark Goldberg, PDK, 2001

MY BEDROCK BELIEFS

CORE ELEMENTS OR VALUES
Helps You Form A Vision for Excellence and Change

MY BEDROCK BELIEFS

• GOOD SEEDS GROW IN GOOD CULTURES
  – Print, Meaning, Sound, Story and Talk
  – Becoming Meta
• CONSULTATION AND COLLABORATION
• INDIRECT SERVICES and for speech
• DOING A FEW THINGS EXTREMELY WELL
A FEW THINGS DONE WELL!

- FOCUS ON FUNCTIONALITY
- FOCUS ON THE MOST IMPORTANT THINGS
- INTERVENTION WITH AND THROUGH OTHERS
- A SYSTEM IN PLACE THAT WORKS WITHOUT YOU
- KNOW YOUR CLIENT WELL ENOUGH TO HELP HIM

MORE THAN 1 TREATMENT CONTEXT
SHARED STIMULI ACROSS CONTEXTS
MULTIPLE INTERVENTION AGENTS

and

In God We Trust ... All Others Need Data!

A FEW THINGS DONE WELL!

- FOCUS ON FUNCTIONALITY
  ... in context.
- FOCUS ON IMPORTANT THINGS
- DESIGN INTERVENTION
  ... with and through others
- PUT A SYSTEM IN PLACE
  ... that works without you
- KNOW YOUR CLIENT
  ... well enough to help him

MORE THAN 1 TREATMENT CONTEXT
SHARED STIMULI ACROSS CONTEXTS
MULTIPLE INTERVENTION AGENTS

AND

In God We Trust, All Others Need Data!

• Teamwork & Team First
• PRACTICAL Goal Setting
• A Good Process (System) Wins
• Learn From Your Mistakes
• Help Others Get Better
• Support (Be There for) Others
• Coach Others
• A Few Things Done Well
• Represent Community
• Winning isn’t Everything
• Good Will Show it’s Hand
• Don’t be a You Know WHAT…

YOUR SPEAKER TODAY!

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MOTOR-BASED APPROACHES

Articulation and Phonological Errors are Modified in Two Ways:
1. Movements are taught to replace incorrect movements
2. Movements may be taught where they were formerly absent.
SOME POPULAR MOTOR-BASED APPROACHES

• The Traditional Approach (Van Riper)
• Sensory-Motor (McDonald, Shine)
• Learning Theory Orientations
  – Programmed Instruction (Baker, Ryan, Mowrer)
  – Multiple Phoneme (McCabe and Bradley)
  – Paired Stimuli (Weston & Irwin)

Top-10 Uses All 3 Approaches

FOUR CRITICAL FEATURES OF MOTOR SKILL DEVELOPMENT

• Cognitive Analysis
• Practice (and Deep Practice)
• Stages of Motor Skill Development
• Feedback

Ruscello (1984)

COGNITIVE ANALYSIS

• The Learner Evaluates Performance Mentally
  - Then Incorporates Appropriate Movements
• Once Movements are Stabilized
  - Then Cognitive Planning is Minimized

Key Aspect is:
  - Internalization of a Skilled Movement is Thought to Contribute to Generalization Across Contexts

PRACTICE

• The Key Variable for Motor Skill Mastery
• Related Practice Aspects Include:
  – Internal-External Feedback Increases Accuracy
  – Practice Occurs First in Limited # of Contexts
  – First Priority is Correct Execution

Early Treatment Focuses on Discrete Productions, e.g., Isolated Sound or Word Practice… Later Sessions Emphasize More Advanced (Complex) Productions.

STAGES OF DEVELOPMENT

• Initial Sluggishness in Execution
  - Acquisition of Movement
• With Practice, the Motor Skill is Perfected and Stabilized
• Ultimately, the Skill Becomes a Part of a Learner’s Repertoire of Skilled Movements
  Production Becomes Automatic!

FEEDBACK

• Motor Learning Literature Stresses the Importance of Internal & External Feedback
  Feedback is Critical in Early Development.
• Practice, However, is the Key! But What Kind of Practice?
  The Skill is Eventually Perfected Through Practice, which Ultimately Renders Feedback Less Important.
THE TREATMENT PROCESS

• From a Motor Skill Perspective, Treatment is a Continuum involving Three Stages:
  – Establishment of New Skills
  – Facilitating Generalization
  – Transfer & Maintenance

ESTABLISHMENT TRAINING

Four Methods Used Historically
1. Imitation (Stimulability)
2. Contextual Utilization
3. Phonetic Placement
4. Successive Approximation

SOUND ESTABLISHMENT

• Elicitation of Target Behaviors
• Stabilization of Skills at a Voluntary Level
• Related Issues are:
  – When to Utilize Sensory Feedback
  – Impact of Meaning ... Motor Theory of Speech Perception
  – Minimal & Maximal Contrasts

SOUND ESTABLISHMENT (Continued)

CLIENTS WHO NEED ESTABLISHMENT TRAINING:
1. The target is not in the sound repertoire or it may not be stimulable (Stimulability later).
2. The target is produced in some contexts but not produced on demand.
3. The client may not discriminate the target sound in minimal pairs.
4. The client may not use the target sound in a particular context or position.
5. Difficulty with context, position or sequence.
6. Produces target upon demand but does not easily incorporate it into syllabic units.

Eliciting Sounds
Wayne Secord, Suzanne Roger, Jo Ann Dreece, Rob Fox, and Rich Shine

• Phonetic Descriptions
• Common Errors
• Dialectal Variations
• Phonetic Placement
• Moto-Kinesthetic Methods
• Sound Approximation Methods
• What Makes ES Work: /s/ and /r/

32 Years Old 2013
Let's Have a Look!

PMV Features: mid/central/rounded

Again From Eliciting Sounds (2nd Ed)
- Phonetic Descriptions
- Common Errors
- Dialectal Variations
- Phonetic Placement
- Moto-Kinesthetic Methods
- Sound Approximation Methods
- What Makes ES Work
- Stimulability (Mirror Game)
- /hs/, lateral /s/ and /r/.

GENERALIZATION
- Positional Generalization
- Contextual Generalization
- Situational Generalization
- Linguistic Unit Generalization
- Sound and Feature Generalization

TRANSFER & MAINTENANCE
- Designed to Stabilize and Facilitate the Retention of those Skills and Behaviors Learned During Establishment and Generalization Phases.
- Sometimes involves the following:
  - A Gradual Reduction of Instruction
  - Activities to Habituate Responses
  - Vigilance Re: Regression from Treatment
**MOTOR-BASED APPROACHES**

**PRODUCTION - PERCEPTION**
- Primary Emphasis on Production Training
- Secondary Focus on Perceptual Training
  - Historical Emphasis on Discrimination Training
  - Timing & Amount of Discrimination Training
  - Today, the Emphasis is on
    - Conceptualization
    - Meaningful Features
    - Contrasting
      - Minimal
      - Maximal

**THE TRADITIONAL APPROACH**

**Hallmarks Are:**
1. Sensory-Perceptual Training focusing on identifying the target and discriminating it
2. Varying and Correcting Production
3. Strengthening and Stabilizing Production
4. Transferring Skills to Everyday Situations

*The Major Emphasis is on Stabilizing Motor Production Skills!*

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**SEQUENCE OF TRADITIONAL THERAPY**

1. **Sensory Perceptual Training**
   - Identification
   - Isolation
   - Stimulation
   - Discrimination
2. **EARLY Production Training**
   - Isolation
   - Syllables (IFM)
   - Words (IFM)
   - Word Level Sequence

**SEQUENCE OF TRADITIONAL THERAPY**

2. **LATER Production Training**
   - Phrases
   - Sentences (Single to Multiple Instances)
   - Conversation (Structured – Unstructured)
   - Highly Structured Conversation (Key Words are Known)
   - Structured Reading Activities (Key Words are Known)
   - Less Structured Reading Activities (Key Words “Less - Known”)
   - Less Structured Conversation (Key Words “Less - Known”)
   - Totally Unstructured Conversation
   - Transfer Activities
   - Maintenance Activities

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**INTERVENTION PLANNING**

Preliminary Considerations

Traditional - Behavioral (Motor) ↔ Phonological

1. **Traditional Therapy**
   - Correctness (accuracy)
   - Stability (stabilization)
   - Carry-Over
2. **Behavioral**
   - Accuracy
   - Fluency
   - Generalization (Transfer - Maintenance)
3. **Phonological**
   - Patterns & Considerations
   - Key Components
   - Contrasts & Phonological Knowledge
   - Amplification & Salience
   - Meaning, Meaning and Meaning

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**INTERVENTION-BASED ASSESSMENT**

S-CAT (Secord & Shine 2003)

1. **Gathering Pretreatment Data**
   - Baseline Data
2. **Relevant Measures**
   - Numbers of Responses
   - Accuracy of Responses
   - Rate of Responses
   - Time Involved in Treatment
   - Fluency & Deep Practice
   - Age Related Concerns
     - Preschool
     - School Age and Adult

*MORE LATER*
CLINICAL OBJECTIVES
More On Treatment Planning

1. LONG-TERM OBJECTIVES
   (What you want for the person or group in general - examples)

2. SHORT-TERM OBJECTIVES
   (Your exact daily goals for the person or group)

3. COMMON MEASUREMENTS
   - Numbers of Responses
   - Terminal (Target) Goal Behaviors
   - Criterion Levels for Success
   - Criterion Levels “Old Fashioned”
   - Conditions for Target Behaviors

INTERVENTION PLANNING
Critical Concepts Involved

1. Decision Making Schema
2. Designing Treatment
   - General Long-Term Objectives
   - Specific Short-Term Objectives
   - Procedures (What’s Therapeutic?)
   - Evaluation Component
   - Deep Practice
   - Generalization Planning
     * Key Concepts
     * Self-Monitoring
     * Motivation
     * Conscious Presence
     * Shared Materials
     * Multiple Contexts
     * Memorized Words
     * Multiple Intervention Agents

Traditional Motor-Based Approaches

• Are Recommended For:
  – Clients with residual errors such as lisping
  – Clients with problematic contextual productions or specific coarticulatory errors which require direct practice.
  – Clients with certain oral or facial weaknesses who need practice to improve the range, force, timing or rate of articulatory production.
  – Children who need motor practice to support or augment other more conceptually (linguistically) oriented approaches.

A FEW THINGS DONE WELL!

• FOCUS ON FUNCTIONALITY
• FOCUS ON THE MOST IMPORTANT THINGS
• INTERVENTION WITH AND THROUGH OTHERS
• A SYSTEM IN PLACE THAT WORKS WITHOUT YOU
• KNOW YOUR CLIENT WELL ENOUGH TO HELP HIM MORE THAN 1 TREATMENT CONTEXT
• SHARED STIMULI ACROSS CONTEXTS
• MULTIPLE INTERVENTION AGENTS

and

In God We Trust ... All Others Need Data!

VAN RIPER’S BEDROCK BELIEFS

UNDERSTAND THE NATURE OF THE DISORDER
- ASSESSMENT SHOULD FOCUS ON FUNCTIONAL SKILLS
- PRIORITIZE THE MOST SKILLS OR BEHAVIORS
- DEVELOP A CONSCIOUS PRESENCE FOR NEW RESPONSES
- MOTIVATE THE CLIENT TO USE HIS NEW BEHAVIORS
- MOTIVATE YOURSELF TO SUCCEED WITH EACH CLIENT
- PUT A SYSTEM IN PLACE TO SUPPORT YOUR CLIENT
- FOCUS ON CARRY OVER - GENERALIZED LEARNING
- OBSERVE AND TRACK PERFORMANCE CAREFULLY

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- FOCUS ON CARRY OVER - GENERALIZED LEARNING
- OBSERVE AND TRACK PERFORMANCE CAREFULLY
**TOP-10 IDEAS**

1. Develop a Conscious Presence for the New Responses
2. Motivate the Student (Client) to Change and Use His New Behaviors
3. Motivate Yourself to Succeed with Each Client

**TOP-10 IDEAS**

1. **Conscious Presence**
   - Motivation
   - Ownership
   - Awareness

2. **Generalization**
   - Some Other Factors
   - The Clinical Process
   - Motor Learning
   - Deep Practice

3. **Speech Contract**
   - The Ohio State University
   - Speech and Hearing Clinic

   **SPEECH CONTRACT**

   Student Name: _________________________________

   I promise to do my very best as a Speech Club Member. I know that being a club member means the following:
   - Remembering to practice at home.
   - Remembering to say my key words correctly.
   - Coming to Speech on Time.
   - Trying my very best to learn to my sound.

   ________________________ Student Signature
   ________________________ Speech Teacher Signature
   ________________________ Principal’s Signature
Member Name: _________________________________

Key Words
______        ______        ______        ______        ______
______        ______        ______        ______        ______

1. ________       2. ________       3. ________
4. ________       5. ________       6. ________

IMPOSSIBLE WORD COMBINATIONS
1. _______  ______           2. ______  ______
3.  _______  ______           4. ______  ______


IMPOSSIBLE WORD COMBINATIONS
1. Page Seven                   2. Face Mask
3. Nice Shirt                       4. Miss Sandy

TOP-10

10 - Master Elicitation Techniques
- Become an Expert with PMV
  - Master Stimulability Techniques
9 - Use Speech Contracts and Key People as witnesses
8 - Create a Speech Club and Use Speech Club Cards as Tools
7 - Foster a Sense of Ownership, Key Words: My Words: Your Words: Conscious Presence
6 - Create Key Talking Times and Utilize Aids for In-School and Home Practice Monitoring and Think About a Web Site
5 - Use an Answering Machine

VAN RIPER'S BEDROCK BELIEFS

- DEVELOP A CONSCIOUS PRESENCE FOR THE NEW RESPONSES
- MOTIVATE THE STUDENT (CLIENT) TO CHANGE AND USE HIS NEW BEHAVIORS
- MOTIVATE YOURSELF TO SUCCEED WITH EACH CLIENT
**TOP-10**

1. **“In God We Trust – All Others Need Data”** - Dismiss Decisions; Mild Problems (RTI and S-CAT)
2. **Directive Articulation Therapy (DAT)** - Take Him Where He or She “Wants to Be” And the Number 1 Strategy is....
3. **Build Fluency – Use a Stop Watch** (Speed-Accuracy & Deep Practice) Promotes Precision & Generalization
4. **Use Deep Practice - With Key Words (My Words) and Link to the Impossible Folder (Hard Words)** - Builds Self Concept.

**S-CAT**

*S-CAT*
Second Consensual Articulation Status
Storytelling Probes of Articulation Competence
Wayne A. Scardamalia and Richard E. Ware

**C-PAC**
TWCT >

**S-PAC**
This story is about the dog and the cat named Max.

Max was walking down the street when he saw a bird in the sky. He chased after the bird, but it flew too fast. Max was disappointed but decided to keep going.

Then Max saw a cat named Sassy. She was playing in the park, and Max wanted to join her. They played together for a while until Max's owner called him home.

Max learned that sometimes things don't go as planned, but it's okay to keep trying.
TOP-10

4. Use Deep Practice - With Key Words (My Words) and Link to the Impossible Folder (Hard Words) - Builds Self Concept.

3. Build Fluency – Use a Stop Watch. (Speed-Accuracy & Deep Practice) Promotes Precision & Generalization

2. Directive Articulation Therapy (DAT) Take Him Where He or She Wants to Go. And the Number 1 Strategy is....

1. "In God We Trust – All Others Need Data" - Dismiss Decisions, Mild Problems (RTI and S-CAT)

Real Change

Deep practice
Deliberate practice

Coyle, Daniel The Talent Code

Deep Practice
Olympic Athletes
How They Use It

Deliberate Practice
One Objective: Improve performance.
People who play tennis once a week for years don’t get any better if they do the same thing each time.
What separates people is not the presence or absence of difficulty, but how they deal with the inevitable difficulties.

resilience

We may erroneously think that if a child just gives the right response in the right way in speech therapy the child will improve.

For Both Students & SLPs

Resiliency
Deep practice
Intrinsic motivation
Reward process

Deep and Deliberate Practice
2. Repeat, repeat, repeat.
3. Seek constant, critical feedback.
4. Focus ruthlessly on where you need help.
5. Prepare for the process to be hard.

Internal locus of control.

Intrinsic Motivation
Our current model
Stimulus-response-reward.
Short term gains in therapy ‘exercises’
Results in inefficient/ineffective “generalization”.

SLP rewards target behavior
No learning or experiential opportunity for the child
Leaves no sense of the internal, deeper practice for child to become an independent learner.
Child remains dependent on the external rewards to let him know “Good job!”

Deep & Deliberate Practice
1. Choose a vital (key) behavior – a big change behavior.
2. Demand full attention for brief periods.
3. Introduce desirable difficulties.
4. Allow time to figure it out.
5. Analyze what was done.

Extrinsic Rewards
The Deadly Flaws
1. Extinguish intrinsic motivation
2. Diminish performance
3. Crush creativity
4. Encourage cheating & shortcuts.
5. Can become addictive.
6. Foster short term thinking.

Deep & Deliberate Practice
6. Reinforce the behavior NOT the accuracy of the response.
7. Immediate feedback against clear standard.
8. Prepare for setbacks – Recovery
9. Build emotional skills. It’s OK. Go Know Brain.
10. Is it worth it? Can I do it?
NOT:
How can we motivate (children, families, teachers).

BUT:
How can we create the conditions within which others will motivate themselves.

Practice
☐ Musicians
☐ Athletes
☐ Doctors
☐ Nurses
☐ Pilots
☐ Speech
☐ Pathologists?

FEEDBACK & ACCOUNTABILITY

TOP-10
4 - Use Deep Practice - With Key Words (My Words) and Link to the Impossible Folder (Hard Words) - Builds Self Concept.
3 - Build Fluency - Use a Stop Watch (Speed-Accuracy & Deep Practice) Promotes Precision & Generalization
2 - Directive Articulation Therapy (DAT) Take Him Where He or She "Wants to Go" And the Number 1 Strategy Is....
1 - "In God We Trust - All Others Need Data" - Dismissal Decisions; Mild Problems (RTI and S-CAT)

WHAT DOES IT TAKE!

• SCIENCE
  - Evidence-Based Practice Principles
  - Systems-Based Thinking
  - Tipping Points to Lead Change
  - Well Established Bedrock Beliefs, and
  - A Vision for Excellence
• MOTIVATION
  - Collaboration Success with & Through Others
  - Willingness to Stick Your Neck Out
  - Student Coaching & Empowerment
  - Conscious Presence
• HEART
  - A Mission Focused on Others
  - A Strong Sense of Community
  - A Commitment to Service
  - A Sense of Wholeness and Caring for ALL

TO ME LEADERSHIP MEANS

• GOING TO OTHERS
• MODELING NEW WAYS
• TALKING AND LISTENING
• ENCOURAGING OTHERS
• BUILDING PARTNERSHIPS
• HAVING GREAT FAITH
• RAISING OTHERS UP
• INSPIRING CHANGE!