Dual Language Learning for Children with Hearing Loss

Intervention

Purpose
To share a variety of successful interventions for bilingual children and families
To acknowledge the challenges and rewards in working with this population
To stress the importance of “mother tongue” and subsequent transition to majority language

Learning Objectives
• Understand the importance of supporting the home language
• Identify resources that can facilitate effective bilingual intervention
• Understand current intervention models and their outcomes
Who are we talking about?
Linguistically Diverse Populations

Simultaneous bilinguals
Sequential bilinguals
Fluency in one language with significant exposure to another
Use of more than one dialect
Limited English Proficient

Historical Perspective

Children with HL loss exhibit deficits/delays in mastering one spoken language

For this reason, clinicians have been reluctant to recommend bilingual language environments for such children

In U.S., parents of children with HL or other challenges often have been discouraged from using a language other than English in the home.

Manuel
Why Support the home language for Children with HI?
Demographic-Social-Ethical...Possible?

Parent-Child Bond!
Why Support Bilingualism?

Why Support the Home Language? Maternal Well Being

Mothers’ Quotes

“If I were not to speak to my child in my native tongue, then she would lose a piece of me......”

“When I spoke English to my child, I didn’t feel I was connecting to her. I did not feel home to me...”

“English is not my heart language...”

Intervention for Children with HL from Linguistically Diverse Homes

One Language

Or

Two?

Environments and Outcomes

INTERVENTION CONSIDERATIONS

Service Provision Decisions
“Immersion is Key... in BOTH languages”

Ellen Rhoades, Ed.S., LSLS, Cert. AVT
November 28, 2007

"Auditory-Based Therapy when the Home Language is not English"

Bilingual Children

Simultaneous
Two or more languages before 2 or 3

Family

Sequential
Another language After 3

Monolingual Other
Language
Language other than the majority is spoken at home and in the neighborhood

Bilingual
Both the majority and Minority languages are Spoken at home and in The neighborhood

Designing Intervention

Bilingual Child with HL

Maj. Lang. Intervention

Min. Lang. Intervention

Audiology

(Moog & Stein, 2008) (Genesee, 2008)
Language of Intervention Decisions

Gonzalez et al, 2008

<table>
<thead>
<tr>
<th>Clear Dominance</th>
<th>No Clear Dominance</th>
<th>Bilingual Dominance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominant Language</td>
<td>Home Language</td>
<td>Both Languages</td>
</tr>
</tbody>
</table>

Language of Intervention Decisions

(Gonzalez et al, 2005; Kohnert & Der, 2004)

Intervention Models

(Gonzalez et al, 2005; Douglas, 2011)

Simultaneous Bilingualism

These may operate on a continuum
Sequential Bilingual Process

First
Develop L1 for 3-4 years. (or more)

Second
Begin L2 & cont. with L1 training
Enlist the Family &/or Tutor

Third
Provide Coordinated Services

90/10
80/20
70/30
50/50

Dual Language Programs

Kohnert & Dev, 2004
Designing Bilingual Language Intervention

Focus on structures that are similar between languages

<table>
<thead>
<tr>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOUN + NOUN</td>
<td>NOUN + NOUN</td>
</tr>
<tr>
<td>Papa Oso</td>
<td>Papa Bear</td>
</tr>
<tr>
<td>SVPP</td>
<td>SVPP</td>
</tr>
</tbody>
</table>

El gato esta dormiendo en la mesa
The cat is sleeping on the table

Cross Linguistic Model

<table>
<thead>
<tr>
<th>NOUN + ADJECTIVE</th>
<th>ADJECTIVE + NOUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carro azul</td>
<td>Blue car</td>
</tr>
<tr>
<td>REFLEXIVE PRONOUNS</td>
<td>REFLEXIVE PRONOUNS</td>
</tr>
<tr>
<td>Ella se la comio</td>
<td>She ate it herself</td>
</tr>
</tbody>
</table>
Facilitating Intervention Plans

<table>
<thead>
<tr>
<th>IT TAKES A VILLAGE!</th>
<th>Bilingual – Majority and Minority Language Speaking Families</th>
<th>Monolingual Minority Language Speaking Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Mutual strategizing for home intervention – (minority lang. use @ hm.)</td>
<td>Minority language is spoken at home and in the neighborhood</td>
</tr>
<tr>
<td>Therapy</td>
<td>Individual therapy in the majority language with active parent participation – parent uses the strategies in the minority language at home.</td>
<td>Individual therapy is provided in the minority language (with bilingual therapist/assistant or monolingual therapist and an interpreter).</td>
</tr>
<tr>
<td>School</td>
<td>Maj. language immersion through an auditory-oral or mainstream preschool.</td>
<td>Maj. language immersion through an auditory-oral preschool program.</td>
</tr>
<tr>
<td>Extra-curricular</td>
<td>Parent may enroll the child in additional, individualized minority language training.</td>
<td>Parent may enroll the child in additional, individualized majority language training.</td>
</tr>
</tbody>
</table>

Second Language Acquisition Strategies

(Roseberry-McKibbin, 2001)

Preproduction
- Provide ample listening opportunities
- Immerses with language
- Used mixed ability grouping
- Create high context in shared readings
- Use TPR

Early Production
- Ask yes/no questions
- Respond in two-3 words
- Have students point to or move objects to show comp.
- Do Shared reading with props
- Use Predictable patterned books

Speech Emergence
- Ask open-ended questions
- Model, expand, restate
- Have students describe personal experiences
- Use predictable pattern books
- Have children complete language experience books

Intermediate-Advanced Fluency
- Structure group discussions
- Provide more advanced literature
- Ask students to create narratives
- Continue on-going language development through integrated language arts and content area activities

Simultaneous and Sequential Bilingualism

Dual Language Learning Strategies

MAKE IT COMPREHENSIBLE!
Strategies for Speech & Language Learning

Scaffold Skills

- Modeling (Say then show)
- Imitation (also used to improve LSL), Cloze Procedure
- Pausing/expectant look (listening and talking are required to participate)
- Accept responses and shape using successive approximations
- Explicit Instruction, OWLS
- Expand, Extend, Recast
- Choral Speaking / “Say it with me”
- Repetition, ask yes/no questions
- Word Walls
- Total Physical Response

Important!

Service Continuum Models

Video Tape Examples

Service Models
<table>
<thead>
<tr>
<th>Phase</th>
<th>Preproduction</th>
<th>Early Production</th>
<th>Speech Emergence</th>
<th>Intermediate-Advanced Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Provide ample listening opportunities • Immerse with language • Used mixed-ability grouping • Create high context in shared readings • Use TPR</td>
<td>• Ask yes/no questions • Respond in two-3 words • Have students point to or move objects to show comp. • Do shared reading with props • Use predictable patterned books</td>
<td>• Ask open-ended ?s • Model, expand, recast • Have students describe personal experiences • Use predictable patterned books • Have children complete language experience books</td>
<td>• Structure group discussions • Provide more advanced literature • Ask students to create narratives • Continue ongoing language development through integrated language arts and content area activities</td>
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**Bilingual Support Model**

**Preproduction Phase**

**Coordinate Service Model**

**Ind. Therapy Spanish 1/week with Parent**

**Home Spanish**

**Pre-K Class English 5/week**

**Small Group English 3/day, 5/week**
Jacqueline

Background
- Bilateral – sev-profound Hi, corrected to mild with CI.
- Bimodal-CI + HA
- Implant activated at 19 months
- Appropriate intervention started at 40 months
- Sporadic attendance in school and therapy

Intervention
- Monolingual Spanish-speaking only home and neighborhood – incl. Tx in Spanish
- Auditory-oral preschool for English Immersion

Video Tape Segments
- Demonstrating Coordinated and Integrated Models
- Final slide – Conversational Language Activity – Target “ya” in Spanish then “already” in English, both in SVO Sentences.
- Final video is taken at 4 years of intervention

Techniques
Notice how the 2nd therapist has fun while using:
- Explicit instruction to transfer language,
- modeling, imitation
- Scaffolding/shaping, and
- Repetition to develop automaticity

Coordinated Service Model
1 yr after baseline
Early Production Phase

Speech Emergence Phase
Integrated Model
Year 3 or 4
Intermediate Fluency Phase

Combination Model
Advanced Fluency Phase

Facilitating Beginner Sequential Bilingualism:
What it may look like
1. English example
2. Word Repetition
3. Parent Training
No Bilingual Staff? No Problem!

There are ways to COMPENSATE!

McConkey Robbins (2007) *Loud & Clear! Issue 1*
Adv. Bionics Corp.
Douglas, 2011 HearSAY Issue 7 MED-EL

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Ways to Compensate for Staff Shortages

### Bilingual Families
- Tag Team Approach
- Parent-Centered Integrated Model
- Refer to a Language Teacher

### Monolingual-other Language Families
- Tag Team Approach
- Use of Interpreters
- Refer to a Language Teacher

You don’t have to know the language. Just know what to do.

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**Tag Team Approach**

- Clinician demonstrates in English and interacts in English with the child.

- The parent follows suit in the home language and interacts with the child in the home language.

- Clinician Observes and Provides Positive Feedback

You don’t have to know the language. Just know what to do.
Coaching Techniques

- Strong voice
- Eye contact
- Slower Rate
- Call child’s name
- Keep at ear level
- Quiet environment
- Acoustic highlighting
- Cues for comprehension
- Model given
- EQUIPMENT PRACTICE!
- Give more written notes/info
- Clinician model in English
- Parent re-do in 2nd lang
- Clinician feedback
- Lots of compliments
- Parent tries again
- Simple homework
- Eng. Vocab for parents
- John Tracy Clinic
- Every voice important—relatives attend sessions
- Lots of Music used

Facilitating Intervention Plans

Slow and Steady Wins ……

- Work on fewer skills with more intensity
- Reinforce parent role as primary language teacher
- Validate use of family’s cultural language/traditions

Facilitating Intervention Plans

Slow and Steady Wins the Race!

- Praise, praise, praise
- Support parent as being welcomed and encouraged to participate in school and with teachers
- Model a more effective strategy rather than critiquing parent – may be threatening
- Invite family to bring in toys, items, books, food and music that represent their culture and language
Tag Team Approach Video Example

Tag Team Approach Video Example

Tag Team Approach Video Example
Parent Centered Integrated Model
Douglas, 2011

- Therapist and parent mutually plan a home language and majority language approach with the family.
- Therapist conducts sessions with the family in the majority language with a focus on listening and speaking strategies (much like beginning sequential learning, or i.e. resource Talk around the Clock)
- Therapist inventories words the child learns in the home language and “integrates” them into therapy sessions for transfer to the majority language.

Parent-Centered Integrated Model
Douglas, 2011

For Bilingual Families Only!

Use of Interpreters
Make your

B.I.D.

Briefing Interaction Debriefing

(Langdon, 2002)
Refer to a Language Teacher

- In some cases, the services of a language teacher who can teach the target language may be helpful.

- SLP works with the language teacher to coordinate services. This language teacher may/may not be a teacher of the deaf.

- The two professionals share techniques and/or strategies and implement parallel lessons that facilitate improvement in both languages.
THE EFFECTS OF DUAL LANGUAGE SUPPORT
Bunta & Douglas, In Press

Research Questions
1. How do the language scores of bilingual and monolingual English-speaking children with hearing loss compare?
2. How does treatment in both languages affect language proficiency in bilingual children with hearing loss?

Method
Participants

• bilingual children with cochlear implants and HAs with bilingual therapy support (n = 20)
• monolingual children with cochlear implants and HAs with therapy (n = 20)
• bilingual with no treatment (n = 7)
• age range (about 3 to 8)
• the Center for Hearing and Speech in Houston
• no other issues (other than hearing loss)

Materials and Procedure

• retrospective study
• chart reviews
  — hearing
  — language measures (e.g., PLS-4)
• compare performance of bilingual children with dual language support to monolingual peers
• compare time it takes to reach language threshold with and without bilingual support

Results
Research Question 1

1. How do the language scores of bilingual and monolingual English-speaking children with hearing loss compare?
2. How does treatment in both languages affect language proficiency in bilingual children with hearing loss?

Bilingual children with HL not different from monolingual English-speaking peers ($F(1, 32) = 0.002$ at $p = 0.966$ with a non-measurable effect size of $\eta^2 = 0.000$)

Outcomes Management

SLA = 33m

Outcomes Management

N = 20
Research Question 2

1. How do the language scores of bilingual and monolingual English-speaking children with cochlear implants compare?
2. How does treatment in both languages affect language proficiency in bilingual children with hearing loss?

Bilingual children with HL with and without bilingual therapy differed from each other in English language skills ($F(1, 25) = 12.20$ at $p = 0.002$ with a very large effect size of $\eta^2 = 0.328$).

One other question explored:

**DOES MATERNAL EDUCATION HAVE A SIGNIFICANT EFFECT ON THE CHILDREN’S LANGUAGE AGE?**
Not Supported

There were no statistically significant differences between the language age scores of children with varying levels of parental education (F(3, 32) = .50 at p = 0.69 with a relatively small effect size of 0.045.

Appropriate intervention has the potential to overcome maternal education effects.

Discussion and Conclusions

• with both languages supported, bilinguals’ language skills can be commensurate with monolinguals’
• without working on both languages, bilingual children get behind
• bilingualism is not detrimental to language development in children with loss
• supporting both languages has beneficial results

Dual Language Program Outcomes

Subtractive vs. Additive

Sequential Bilingual Educational Outcomes
Sequential Educational Outcomes
(Collier & Thomas, 2004; Garcia & Jensen, 2006)

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtractive</td>
<td>English language learners are immersed in English only. Some are provided</td>
<td>Students show less progress in math and reading, limited conversational English, little academic progress,</td>
</tr>
<tr>
<td></td>
<td>ESL support (teachers trained to provide special comprehensible input) for</td>
<td>rarely catch up, many forget him, Lang. &amp; drop out of high school. Many are below the 50th percentile in</td>
</tr>
<tr>
<td></td>
<td>three years or more and then are integrated into all-English instruction</td>
<td>English reading tests</td>
</tr>
<tr>
<td>Additive</td>
<td>Content instruction is given in both the target and majority language for</td>
<td>Equal achievement in both languages and equal achievement in the majority language as maj-lang. speaking</td>
</tr>
<tr>
<td></td>
<td>four to six years. In some programs, Majority language is introduced in</td>
<td>peers. Outperform ESL subtractive programs &gt;50%tile in reading</td>
</tr>
<tr>
<td></td>
<td>second grade or later</td>
<td></td>
</tr>
</tbody>
</table>

Case Examples

Conclusions

- With good speech perception, and EARLY intervention (immersion) in both spoken languages, these young children tend to make monthly gains (some much faster) relatively equal in both languages. Other factors govern the pace of improvement...but they still improve in both languages.

- The children demonstrate the same bilingual phenomenon as reported in normal hearing developing bilinguals.
Conclusions

• Bilingualism with hearing impaired children is a team effort; at the same time, it is no less difficult than helping a hearing impaired child acquire one language.

• The achievement of bilingualism with hearing impaired children is not necessarily related to parent education level.

Conclusions

• Bilingualism takes more than a parent’s desire. It is their actual pursuit and active implementation of the help provided (strategies and processes) that make it happen.

• With normal cognition and no other disabilities, duration of deafness, inconsistent use and/or inappropriate amplification seem to be the largest contributing factor(s) to a child's reduced facility for learning any spoken language in a timely manner.

Conclusions

• Providing individual services in the minority language while immersing the child in a majority language center based program does not impair the child’s ability to learn the majority language.

• Oral deaf preschool teachers play a critical role in the majority-language immersion process for severe-profoundly deaf children who come from a mono-lingual, minority-language speaking home.
Questions?

Additional References

Additional References


• Rhoades, EA. Working with multicultural and multilingual families of young children. In: J Madell & C. Flexer (Eds.), Pediatric Audiology: Diagnosis, Technology and Management. NY: Thieme.


• www.bilingualfamilynewsletter.com (cost to subscribe)