Developing the ‘BEST’* intervention:

a constructivist, cross linguistic therapy approach to ‘Building Early Sentences’ in pre-school children with Language Impairment

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*Winner of 2012 Sternberg Prize for Clinical Innovation
1. The context and drivers for innovation

2. Current stage of development & evaluation

3. The intervention & its rationale

4. The service evaluation results
1. The context and drivers

Social Disadvantage
> 75% adults in central districts living on benefits

High bilingual population
20% of primary school-aged children

Rising pre-school referral rates
>40% increase in previous five years
2. The context and drivers

An Evidence-base which is a poor fit for the population

Recasting, modelling approaches
Low parental engagement

Parent programmes
High drop out & lack of ‘cultural flexibility’

Non-English interventions
Very limited intervention research

Adapted ‘Derbyshire Language Scheme’
Limited evidence for effectiveness; low treatment fidelity; high drop out; highly variable outcomes; principles do not apply cross-linguistically
1. The context and drivers

The researcher’s theoretical perspective

A Neuroconstructivist approach to LI

‘Constructivist’/Usage Based approach to Typical Language Development

Emphasise
- Domain general processes
- Emerging specialisation & abstraction over development
- Importance of input & child cognition
2. The context and drivers

Need to develop a:

- Theoretically motivated
- Acceptable & accessible
- Cross-linguistically applicable
1. The context and drivers for innovation

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2. Current stage of development & evaluation


- Key elements in the development and evaluation process
2. Current stage of development & evaluation

**Research Processes**
1. Identification of evidence base
2. Identification & development of theory
3. Model process
4. Model outcomes
5. Test procedures

**Research Questions**
1. Is intervention associated with positive outcomes?
2. Who for?
3. Are the procedures acceptable and accessible to clients, carers and practitioners?
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• **BEST is**......
  
  • an SLT intervention
  • for young children with Severe Language Delay (3; 06 – 6; 00)
  • Aims to develop children’s ability to
    – use range of simple 2, 3 and 4 element sentences
    – flexibly, with a range of verbs and nouns
    – and with appropriate grammatical morphology
  • Can be used English and a number of Pakistani Heritage languages
3. The intervention & its rationale

Frozen Phrases/item – specific constructions

Cognition

Input

Abstract constructions/paradigmatic categories
3. The intervention & its rationale

Manipulates the nature of the input to support children with Language Delay to apply these cognitive ‘tools’ to language learning.
3. The intervention & its rationale

**Target sentences:**

- SV; SVO; SVA; SVOO; SVOA

**Target Verbs:**

- 11 sets of ‘paired’ verbs,
  - with similar PAS
  - plausibly combined with (mostly) same Ns
3. The intervention & its rationale

For each pair

1. Phase 1: Input with variation

2. Phase 2: Output with contrast & variation
3. The intervention & its rationale

Paget Gorman signs

Set C – Eating

<table>
<thead>
<tr>
<th>The</th>
<th>man</th>
<th>is</th>
<th>eat</th>
<th>-ing</th>
<th>a/an</th>
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<tr>
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apple | orange | banana
3. The intervention & its rationale

- For the 11 verb pairs

- Input is **distributed**
  - 16 sessions (8 – 16 weeks)
  - 3 ‘verb pairs’ per session

  - **Rotate** through ‘verb pairs’ over 16 sessions

- Focus on **Input**
- ‘**Mastery**’ not required
3. The intervention & its rationale

• For parents/carers
3. The intervention & its rationale

- Schematization
- Categorization
- Cultural Learning
- Analogy
- Intention Reading
- Distribution analysis

- Variation around verb

3. The intervention & its rationale

- Contrast between verbs with same PAS

- Non-overlapping sets in each argument structure role.
3. The intervention & its rationale

- **Consistent morphological frame**
  Childers & Tomasello (2003); Ambridge & Lieven (2011)

- **Paget Gorman signs**
3. The intervention & its rationale

- Joint action routine with turn taking
  Tomasello (2003); Bedrova & Leong (2003)
3. The intervention & its rationale

- **Massed presentation**

- **Distributed presentations**
3. The intervention & its rationale

- promoting cognitive mechanisms & manipulating input
- rather than translating an English intervention
- allows for cross-linguistic application
1. The context and drivers for innovation

2. Current stage of development & evaluation

3. The intervention & its rationale

4. The service evaluation results
4. The Service evaluation results:

- Participants:

  referred to SLT 3; 06 - 6 years over ~ 8 month period

  spontaneous utterances limited to only 1 or 2 clause element structures in home language

  limited grammatical morphology
4. The Service evaluation results

• Measures & analysis of data:

• Progress Tracker:
  - 4 data points
  - Score Number arguments
  - Score Number grammatical morphemes

• Analysis
  - Single case statistics- repeated-measures trend analysis for dichotomous data
  - (Howard cited in Marks & Stokes 2010)
    - Is there a significant improvement in scores?
    - (who does and doesn’t improve?)
4. The Service evaluation results

- **Results:** Single case statistics
- 32 returns - 18 complete data: 14 English 4 Mirpuri

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- All children made significant progress
- 4 monolingual English 10 from multi-lingual backgrounds 4 mono-lingual Mirpuri speakers
- 3 made progress in only 1 area
5. The Service evaluation

• **Results:** Practitioner Focus Groups

“It was really motivating because you could instantly see the results and the impact it was having. Previously you’ve been running groups and you’ve done stuff and you’ve kept doing the same stuff...Because you could see how quickly they have grasped it, it kept you motivated.”

“...and Dad was like ‘So actually can I have some homework and can I take it home?’ because he saw him achieving in sessions and he thought I can do that”

“Because it was structured with the family they appreciated that”
The future?

Development

Piloting/Feasibility

Implementation

Evaluation
References


References


