Language intervention using book reading

An investigation of pausing and open questioning
Susan Colmar

The Importance of Early Intervention for Children with Language and Communication Difficulties

- Many children under 6 have difficulties with language and communication: 10% with a significant difficulty and about 20% showing some delay in the early years (McLean & McLean, 1999); therefore, a significant problem
- Concurrent and long-term links with behaviour and mental health issues
- Probability of long-term language and literacy difficulties
- Social-emotional development/learning and language-communicative development/learning are linked from birth and impact on each other, positively and negatively
The Importance of Early Intervention for Children with Language and Communication Difficulties continued

- CDS evidence indicates parental language excellent base for language learning within interactive contexts
- BUT with language difficulties, the interactive pattern, especially with main caregivers can become "set" in a non-progressive pattern
- Parental anxiety, frustration and stress, with the potential for relationship difficulties
- Child frustration, problems with social behaviour and forming peer and other relationships
- Early brain plasticity and neurological "readiness"
- SES negative link can be overcome

Sebastien with Books
"MEANINGFUL DIFFERENCES IN THE EVERYDAY EXPERIENCE OF YOUNG AMERICAN CHILDREN"
Hart & Risley, 1995

- There is a pervasive effect of socio-economic advantage influencing the language learning of young children. By contrast, race, gender, place in family, etc do not matter.

- All children have the same kinds of everyday experience but at very different frequencies. Frequency matters.

- "By the time the children were 3 years old, parents in less economically favoured circumstances had said fewer different words in their cumulative monthly vocabularies than had the children in the most economically advantaged families in the same period of time." (Bloom, 1995 quoting Hart & Risley, 1995.)

Sample of Children

- 15 in final sample, 8 Experimental, Group A and 7 Control, Group B
- 11 boys, 4 girls
- Control group, B, received intervention subsequently [waiting list control]
- All mothers trained and 5 preschool workers
- Language delays, 8 with diagnosable “causes”
- Half the experimental group A, 4 boys and 4 mothers continued with the control group, so became continuers
Bradley, Mum and Susan
“He now runs to get books”

Procedure

- Pre-test 22 children TELD, LDS, Parent Demographic, final sample 15 children
- Train Mothers in A group with Demonstration, Notes, Record Books, Reading Books
- Train Teacher if applicable
- Intervention carried out
- Follow up phone call after about 2 months
Procedure Continued

- Post-testing TELD with parallel form after 4 months, maternal and preschool worker interviews
- Train Mothers in Control or B group with Demonstration, Notes, Record Books, Reading Books
- Train Teacher if applicable
- Intervention carried out, plus 4 Group A boys continuers
- Retest after 4 months

FOUR KEY ELEMENTS TO THE TRAINING PROGRAM

1. The intervention technique of pausing to allow the child an opportunity to talk first, that is, to initiate the topic of interest to them (Colmar, 1999, 2005)

2. The technique of asking the child to say more on the topic s/he has initiated, using an open question or request for elaboration [incidental teaching, Hart & Risley]
FOUR ELEMENTS
CONTINUED

3. Children’s picture books as the stimulus for language teaching and learning (Colmar, 1999)

4. The encouraging of parents to use the same key strategies of pausing and conversation building in everyday settings as often as they are able; therefore, using many opportunities of child initiations or attentional focus, giving much more practice

Figure 1  Number of initiatives by Rachael, and her mother and teacher.
Figure 3  Turns by Rachael, and her mother and teacher.
Principles for the Program

• Deliberately simple training, consultative style input, with the focus on naturalistic intervention by everyday caregivers using everyday opportunities and book reading with pausing and open questioning as the “practice” context

• Within the broad milieu teaching approach (Warren, Kaiser, Hart and Risley)

• Focus on communication: functional and social-emotional elements in language learning

• Strong evidence that interactive communication is the basis for language learning; role of love

Summary Results

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Significance (1-tailed)</th>
<th>Cohen’s d (Effect size)</th>
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<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Receptive language</td>
<td>A</td>
<td>8</td>
<td>19</td>
<td>11.88</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>7</td>
<td>6.43</td>
<td>15.35</td>
<td>0.42</td>
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<tr>
<td>Expressive language</td>
<td>A</td>
<td>8</td>
<td>16</td>
<td>8.16</td>
<td>0.002</td>
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<tr>
<td></td>
<td>B</td>
<td>7</td>
<td>1.43</td>
<td>7.53</td>
<td>0.19</td>
</tr>
<tr>
<td>General language quotient</td>
<td>A</td>
<td>8</td>
<td>20.88</td>
<td>9.09</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>7</td>
<td>4.57</td>
<td>9.7</td>
<td>0.47</td>
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</table>
Case Study 1: Fergus O
Four Month Intervention

<table>
<thead>
<tr>
<th>Age</th>
<th>ELQ</th>
<th>%ile</th>
<th>RLQ</th>
<th>%ile</th>
<th>GLQ</th>
<th>%ile</th>
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</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>3; 3</td>
<td>77</td>
<td>6th</td>
<td>74</td>
<td>4th</td>
<td>71</td>
</tr>
<tr>
<td>Posttest</td>
<td>3; 7</td>
<td>97</td>
<td>42nd</td>
<td>106</td>
<td>66th</td>
<td>102</td>
</tr>
</tbody>
</table>

Maternal Feedback: Fergus O.

- “Definite improvement”
- Grammar, vocabulary, comprehension improved
- Talks more about what he has done at preschool
- More imaginative play
- Behaviour has improved - fewer tantrums
- Willing to read with Mum, initially Mum thought bookreading wouldn’t work
General Language Quotient in the Intervention Group (pretest & posttest)

Case Study 2 Jayden de B

<table>
<thead>
<tr>
<th>AGE</th>
<th>ELQ</th>
<th>RLQ</th>
<th>GLQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:10</td>
<td>63, 1st percentile</td>
<td>80, 9th percentile</td>
<td>66, 1st percentile</td>
</tr>
<tr>
<td>5:2</td>
<td>91, 27th</td>
<td>96, 39th</td>
<td>92, 30th</td>
</tr>
<tr>
<td>5:6</td>
<td>91, 27th</td>
<td>115, 84th</td>
<td>104, 61st</td>
</tr>
</tbody>
</table>
Who Succeeded?

- Effective for children with initial vocabulary of 60 words plus, 11 out of 15
- Maternal input and follow through was needed, records and interview data confirmation
- Children with vocabulary below 60, MLU <2 and attentional and/or intellectual difficulties not effective
- Four out of 15 not successful
- Test floor issue, e.g., Lucas

Case Study 3: Neville H.

<table>
<thead>
<tr>
<th>Age</th>
<th>ELQ</th>
<th>%ile</th>
<th>RLQ</th>
<th>%ile</th>
<th>GLQ</th>
<th>%ile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>3; 6</td>
<td>67</td>
<td>1st</td>
<td>68</td>
<td>2nd</td>
<td>61</td>
</tr>
<tr>
<td>Pretest</td>
<td>3; 9</td>
<td>65</td>
<td>1st</td>
<td>74</td>
<td>4th</td>
<td>63</td>
</tr>
<tr>
<td>Posttest</td>
<td>4; 1</td>
<td>86</td>
<td>17th</td>
<td>92</td>
<td>30th</td>
<td>87</td>
</tr>
</tbody>
</table>
Maternal Feedback: Neville H.

- Found the program excellent
- Loves stories now
- Improved vocabulary and language
- Giving Neville control and choice has made an enormous difference - a much more effective way for him to learn
- “It unlocked him”
- Neville was anxious, now happy and confident

ELQ continuing

Expressive Language Quotient Intervention Group "continuers"
### RLQ continuing

**Receptive Language Quotient Intervention Group “continuers”**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joshua R</td>
<td>4; 2</td>
<td>4; 6</td>
<td>4; 11</td>
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<tr>
<td>Jayden M</td>
<td>76</td>
<td>94</td>
<td>97</td>
</tr>
<tr>
<td>Jayden D</td>
<td>5th</td>
<td>34th</td>
<td>42nd</td>
</tr>
<tr>
<td>Bradley S</td>
<td>74</td>
<td>83</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>4th</td>
<td>13th</td>
<td>90th</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>16th</td>
<td>74th</td>
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<td></td>
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</tr>
</tbody>
</table>

### Case Study 4: Joshua R.

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>ELQ</th>
<th>%ile</th>
<th>RLQ</th>
<th>%ile</th>
<th>GLQ</th>
<th>%ile</th>
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<tbody>
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<td>74</td>
<td>4th</td>
<td>70</td>
<td>2nd</td>
</tr>
<tr>
<td>Posttest</td>
<td>4; 6</td>
<td>94</td>
<td>34th</td>
<td>83</td>
<td>13th</td>
<td>86</td>
<td>16th</td>
</tr>
<tr>
<td>Follow-up</td>
<td>4; 11</td>
<td>97</td>
<td>42nd</td>
<td>119</td>
<td>90th</td>
<td>110</td>
<td>74th</td>
</tr>
</tbody>
</table>
Maternal Feedback: Joshua R.

- “Has had a language explosion”
- Putting more words together
- Initiates conversations more
- “Talking books”
- Longer sentences
- Better grasp of more abstract concepts
- More confident and assertive
SUCCESES EXPRESSIVE LANGUAGE

Successes Pretest versus Posttest on Expressive Language Quotient

SUCCESES PRETEST V POSTTEST: RECEPTIVE LANGUAGE QUOTIENT

Successes Pretest versus Posttest: Receptive Language Quotient
Effect Size

<table>
<thead>
<tr>
<th>Language</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressive Language</td>
<td>1.96 (.3 is small, .5 is average and 0.8 is considered large)</td>
</tr>
<tr>
<td>Receptive Language</td>
<td>1.6</td>
</tr>
<tr>
<td>General Language</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Key Principles Summary

Providing the child with opportunities to initiate (child choice and attention) by PAUSING and opportunities to respond (use and learn expressive language) by asking “real interest” open questions