Round Table Conference

To What Extent Can Research Findings in Bilingualism Be Generalised?
Issue 1

How does the language-learning context affect research findings?
“In order to understand bilingual children’s language acquisition, one must also understand the social-cultural context in which development takes place”

Hammer, Miccio & Rodriguez, 2004
Early vocabulary development: children brought up in Maltese-speaking families

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The language learning context of Maltese children

- Societal bilingualism

- Maltese is the language most spoken in the home setting

- Systematic exposure to the second language through schooling
Child-directed speech in the Maltese context

- Maltese-speaking adults embed English words in Maltese syntactic frames

- Mixed language input

- A widespread pattern that occurs at a societal level
Expressive lexical development

Language background questionnaire

- ‘mostly Maltese with some English words’ = 96.7%
- ‘Maltese only’ = 3.3%

Sample and checklist measures of words used

- 12 months: $N = 20$
- 18 months: $N = 19$
- 24 months: $N = 20$
- 30 months: $N = 17$
Word frequencies

- Maltese word counts approximated total vocabulary count (types for sample data).
- Slower growth rate for English words, with discrepancy in relation to Maltese words increasing with age.
- Limited equivalent use represented little overlap in adult input.
Limited English exposure may have limited children’s capacity for word combinations.
The effect of language learning context

- Mixed input possibly introduced children to language contact in the wider community.

- English vocabulary specific to adult-child dyads may have constituted a baby word lexicon that was gradually phased out.

- Language input must exceed single words in order to support flexible word combinations.
Samoan-English Speaking Children Living in Australia

Gayle Hemsley, Alison Holm & Barbara Dodd

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Samoan-English bilinguals

- Largely 1\textsuperscript{st} and 2\textsuperscript{nd} generation
- Strong cultural identity
- Very few homes where English is not used to some extent
Language use at home:

- Parents and other adults used Samoan ‘most of the time’ when speaking to children and each other.

- By the time children started school they used English ‘most of the time’ when speaking to other children and adults.
Receptive Vocabulary

<table>
<thead>
<tr>
<th>Halfway through first year at school (n=9)</th>
<th>Mean Bilingual Samoan Score</th>
<th>Mean Bilingual English Score</th>
<th>Mean Bilingual Composite Score</th>
<th>Mean Monolingual English Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57.6</td>
<td>49.8</td>
<td>66.9</td>
<td>65.67</td>
</tr>
</tbody>
</table>

*Scores out of 72*
<table>
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<tbody>
<tr>
<td></td>
<td>12.2</td>
<td>40.2</td>
<td>44.3</td>
<td>60.44</td>
</tr>
</tbody>
</table>

*Scores out of 72
Longitudinally...

During the first two years of school:

- significant lexical development in both Samoan and English
- receptive and expressive lexical scores remain significantly below those of monolingual English peers.
Word Classes Test (English):

Word Classes:
- Receptive SS
- Expressive SS

Monolingual English
L1 Vietnamese
L1 Samoan
Semantic Processing Skills of Grade 1 English Language Learners in two educational contexts

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Contexts

- **Context 1:**
  - Children are
    - From a range of home language backgrounds, including indigenous and other African languages.
  - English Additional Language (EAL) learners
  - Learn at a pace conducive to the whole class of EAL learners

- **Teachers are**
  - EAL- speak some of the children’s languages
  - sensitive to the needs of EAL learners
  - adopt a multilingual approach

- **Disadvantage:** teachers not able to teach as effectively in English -their second/additional language.

- **Context 2**
  - First and additional language speakers of English integrated in the same classes
  - Teachers first language is English.
  - Children required to learn in English only
  - Compete with children speaking English as a home language.
  - Not able to use their home language to learn which may affect their rate of learning

- **Advantage:** EFL teachers and learners provide native language models for the EAL children.
INSTRUMENT: SEMANTIC SUBTEST OF DIAGNOSTIC EVALUATION OF LANGUAGE VARIATION CRITERION –REFERENCED (DELV-CR)

- appropriate for assessing language for academic purposes in any context: verb and preposition organisation, quantifiers, fast mapping.

- designed to capture aspects of language important for early schooling and transition to literacy (De Villiers, 2004).

- assesses processes of language learning as opposed to surface content

- appropriate for children aged 4.0 to 9.11
Results: Means (%) for each group: EAL (Context 1 & 2), and English First Language
Conclusions

- Results refer only to limited set of language skills involved in academic language and literacy.

- EAL children not at same level as monolingual peers - need support for vocabulary learning.

- Skills can be developed through explicit instruction as shown when concepts are taught in context (e.g. quantification and mathematics).

- EAL learners may catch up to EFL peers BUT what are the effects of a protracted period of oral language development on literacy attainment?

- Cannot adopt “wait and see” approach - learner support should not be withheld.

- Even where EAL and EFL learners are integrated, specific language skills need to be developed, since all children can benefit from a “language-rich diet” (Clegg, 1996, p12).
Conclusions

- Limitation: classroom observations not conducted
- BUT there may be linguistic benefits to integration of first and additional language learners.
- EFL teachers may be more effective at teaching in English.
- Training and support for EAL teachers and learners is indicated - discrepancies between contexts of education not appropriate.
- All teachers need to become effective language teachers to meet challenges facing our country in 21st century.
- Speech–language therapists are a useful resource in collaborating with teachers to achieve this goal.
- There is a need for SLT services in mainstream schools (O'Connor and Geiger, 2009).
The Importance of Context

- Input models determine language output.
- Language dominance is crucial in determining language choice in specific communicative situations, irrespective of proficiency.

Assessment and Intervention Problems:
- What constitutes normal language difference in sequential bilingualism?
- Choice of language for assessment and intervention (and materials).
- Grammatical and lexical adaptations in clinicians’ child-directed speech.
Discussion
Action

- Should the IALP draw up a preliminary classification system of multi-lingual language learning contexts?
Implementation

- If such a classification system is worthwhile for clinical management and clinical research, how might it be disseminated?
  - Educational courses
  - Incorporated in guidelines
  - Review articles
Issue 2

- Are research findings for one aspect of language relevant for other aspects of language?
- Are findings for one of a bilingual’s languages relevant for the other?
Kakia Pertinou
University of Cyprus
Phonology: Issue I

- Are research findings for one aspect of language relevant for other aspects of language?
  - Research on one aspect of language (e.g. semantics) is not necessarily indicative of other language aspects (i.e., phonology), particularly in communication disorders.
  - For example, typical vocabulary skills can occur with atypical morphosyntax (syntagmatic versus paradigmatic aspects).
  - What is spared and what is lost in connected speech might predict the relationship between morphology and phonology, and may predict MLU-W.
  - In Cypriot Greek, phonological saliency (metrical foot of the utterance) determines the sparing of object clitics and grammatical inflections (Petinou et al, in progress).
Results

- **Greek (GR)**
  - Augment effect – real (RVs) and pseudo verbs (PVs)

**Target Responses (TRs)**

<table>
<thead>
<tr>
<th>Condition</th>
<th>TRs (%)</th>
<th>SD</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>+A/RVs</td>
<td>98.8</td>
<td>3.53</td>
<td>sig</td>
</tr>
<tr>
<td>-A/RVs</td>
<td>96.7</td>
<td>5.16</td>
<td>ns</td>
</tr>
<tr>
<td>+A/PVs</td>
<td>91.9</td>
<td>3.72</td>
<td>ns</td>
</tr>
<tr>
<td>-A/PVs</td>
<td>62.5</td>
<td>14.88</td>
<td>sig</td>
</tr>
<tr>
<td>+A/RVs</td>
<td>88.3</td>
<td>7.52</td>
<td>sig</td>
</tr>
<tr>
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<td>82.5</td>
<td>9.35</td>
<td>ns</td>
</tr>
<tr>
<td>+A/RVs</td>
<td>43.8</td>
<td>14.08</td>
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</table>

**Significant main effects:**
- Augment ($F=12.683$, $df=1$, $p < .01$),
- RVs vs. PVs ($F=101.365$, $df=1$, $p < .001$),

**Interaction**
- RV/PVs * group ($F=36.975$, $df=1$, $p < .000$).
Examples with object clitics

- [‘ida se] Cypriot-Greek
- [I saw you]
- [‘epiasen to] Cypriot-Greek
- [to ‘ pciase] Standard Greek
- [she it took]
- [{e}’potisen to] Cypriot-Greek
- [she watered it]
Are findings for one of a bilingual’s languages relevant for the other?

Bilingual children usually use different developmental error patterns to those used by monolingual speakers of the two languages learned (Holm, 1996).

Findings for one language might explain the existence of “atypical” productions in the other language (i.e., phonological error patterns transferring).

However, phonological error patterns are often different for the two languages spoken (e.g. ‘fronting’ in English but ‘backing’ in Cantonese).

While intervention targeting articulation shows cross-language transfer, phonological intervention does NOT transfer.
Distinguishing delay from disorder is difficult in bilingual children’s phonological acquisition due to L1-L2 interference.

Example 1: the presence of geminates word-medially triggers omission of word initial consonants (Petinou & Okalidou, 2006). This error pattern was used in both languages by 6, 3-year-old late talkers. The error pattern persisted beyond 6 months (the study time span).

The error pattern is typical for monolingual CY-G children. It is NOT typical for English (Paul & Jennings, 1992; Rescorla, 1996)

Example 2: Voicing errors in children with a diagnosis of PDD and phonological disorder. Transferring of the pre-voicing category from CY-G to E ([b] targets->[mbl] realizations), but no difficulty with voiceless unaspirated and voiceless aspirated categories on cognate target words (coffee, camel, pen, telephone).
Syntax

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University of Cyprus
One system at the start?

- Bilingual children produce *mixed utterances* at the initial stages of syntactic development.
- Is this evidence for an initial *single* syntactic system?
- Let us refine the question first:
One system at the start?

- Genesee (1989): *context* as the measure of language differentiation.

- Positive evidence for the single-system hypothesis: if bilingual children use items from both languages regardless of context.

- Positive evidence for the two-system hypothesis: if children use items from their two languages differently in different contexts, e.g. using the mother’s language when addressing her, and so on.
But why would language mixing occur at all?

- Genesee (1989): Language mixing could occur even with separate systems for each language.

- Maybe:
  - children code-switch because one of the systems is incomplete - does not include the grammatical device required to express particular concepts – L2 learners do that all the time.
  - the grammatical device is available in the language currently in use but it may be more complex than the corresponding one in the other language: the child chooses the simpler device e.g., English and Italian question formation.
  - children model utterances on mixed input produced by adults or other children.
Two systems

- Young bilinguals’ languages develop separately at the morphosyntactic level (e.g. De Houwer, 1990; Meisel, 1989; Paradis and Genesee, 1996).

- Bilingual children's developing morphosyntactic knowledge of one language does not function as a basis for speech production in the other language.
Two systems, but...

- Bilingual children have separate but non-autonomous systems.

- Thus, crosslinguistic influence is not unconstrained and it is a principled and systematic phenomenon (Paradis 2001; Paradis and Navarro, 2003).

- This has a number of consequences:
  - Müller (1998) reported that the error types found in English-German bilingual children were qualitatively similar to those made by some monolingual German children.
  - However, they differed quantitatively: bilinguals produced erroneous word orders in German subordinate clauses much more frequently than their monolingual peers.
Where does the interaction come from?

- Syntactic influence between the two systems is not unconstrained.

- The two separate systems will develop independently from each other.

- However, bilingual children receive ambiguous input in some cases.

- In such cases a possible structure in one of the languages will be unduly strengthened because of parallels with the other language: influence occurs.
An example of interaction between the two systems

- English: SVO
  
  *The dog ate the sausage in the morning*

- German: V2

  *The dog ate the sausage*

  *but also*

  *In the morning ate the dog the sausage*

  *The sausage ate the dog*
An example of interaction between the two systems

- Confronted with the German equivalent of *The dog ate the sausage*, an English-German bilingual child might go for the simpler SVO structure (which works for English).

- So, she is expected to make more mistakes in her developing German.
Conclusion

- The two syntactic systems develop autonomously (e.g. Meisel, 1989; De Houwer, 1990).

- However, although the two systems develop separately, there may be some degree of contact between the two languages.

- When structures overlap between the two languages they are vulnerable to more misanalyses (“interaction between them”).
Do findings fit with your experience?

- **Phonology:** Some bilingual children make different types of developmental errors compared to monolingual speakers of two languages learned (Holm, et al, 1996).

- **Syntax:** Bilingual children cannot be discriminated from monolingual children with Language Impairment on language-based tasks (e.g. competing languages, NWR) (Windsor et al, 2006).

- **Syntax AND Semantics:** Bilingual children show strong associations between lexical (number of different words and different verbs) and grammatical measures within EACH language.

Across the two-languages learned, however, there is no relationship between the two domains (Simon-Cereijido & Gutiérrez-Clellen, 2009)
Identification of gaps in the knowledge base on bilingualism.

- What don’t we know?
What clinical research questions are most important?
Issue 3

- Does the language pair learned affect research findings?
The Influence of Language Dyads: Evidence from Phonology

Carol Stow
Rochdale PCT
Data sources

- Mirpuri / Punjabi / Urdu acquired in bilingual context - data from 246 children (Stow and Pert 2006a, Stow and Pert 2006b)

- English acquisition by Mirpuri / Punjabi / Urdu bilingual English speakers - data from 35 children (Holm et al. 1999)
Mirpuri / Punjabi / Urdu acquisition in a bilingual context

- Plosives established before fricatives
- Nasals among the first sounds to be established
- First sound to be established was a dentalised voiced alveolar plosive. This was elicited in the target word for “milk” supporting the neo-Jakobsonian viewpoint of Ingram (1992) that age of acquisition is influenced by linguistic factors
Error patterns in Mirpuri / Punjabi / Urdu acquisition in bilingual context

- Similar processes to those recorded for monolingual English speakers but
  - High incidence (29% between 3;05 – 4;05) of fronting of “sh” → “s”
  - Gliding errors observed were “r” → “l” in contrast to “r” → “w” pattern typical in both monolingual English speakers and bilingual Pakistani heritage speakers of English
  - Intrusive consonants reported in over 25% of children aged 3;06-3;11 and 5;00-5;05
Error patterns in English acquired by Mirpuri / Punjabi / Urdu speakers

- All 35 children reduced clusters in English by inserting a schwa between the cluster elements
- More than 50% stopped syllable-final nasals
- “th” → “t” even when a child could produce “th”

- ALL THREE LANGUAGES SHOW SIMILAR ERROR PATTERNS
Bilingual Children Learning Other Languages

- ‘Spanish-English bilingual children will have commensurate, although not identical, phonological skills as compared to age-matched PS and PE children’ (Goldstein et al, 2005)

- While bilinguals showed higher error rates than English monolinguals, error patterns were mastered equally well regardless of language exposure. (Gildersleeve-Neumann et al, 2008)

- BUT use of the glottal stop as a final consonant in productions of English words (Gildersleeve-Neumann et al, 2008)
<table>
<thead>
<tr>
<th>English Error Patterns</th>
<th>Maltese</th>
<th>Cantonese</th>
<th>Singapore-Mandarin</th>
</tr>
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<tbody>
<tr>
<td>Cluster reduction</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Weak syllable deletion</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
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<tr>
<td>Initial/final consonant deletion</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Stopping</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Fronting</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lateralisation /r, n/</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Backing</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Affrication/de-affrication</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Voicing</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Reduplication</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Gliding</td>
<td>/l/ /n/</td>
<td>✓</td>
<td>/r/ &lt;-&gt; /l/</td>
</tr>
<tr>
<td>Glottal replacement</td>
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<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Addition</td>
<td>X</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Assimilation</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
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</table>
Bilingualism and Phonological Awareness: Language Pair

Barbara Dodd, City University London
Do Bilingual Children Have Enhanced PA?

- The Metalinguistic Advantage:
  - Bialystok (1986) *French + English*
  - Bruck & Genessee (1996) *French + English*
  - Campbell & Sais (1995) *Italian + English*
  - Rubin & Tumner (1989) *French + English*

- European language pairs with alphabetic orthographies
  - Eviator & Ibrahim (2000) The metalinguistic advantage is transitory
Other Language Pairs?

- No Metalinguistic Advantage

- BUT there may be an effect of order of learning language pairs (Louizou & Stuart, 2003)
  - Greek before English: bilinguals = monolinguals
  - English before Greek: bilinguals > monolinguals
Cantonese and Mandarin (and English)

- Chen et al (2004): enhanced onset-rime awareness for C-M bilinguals vs M monolinguals at 7-8 years
- Dodd et al (2008): compared 5 year-old C and M monolingual monolinguals with C-M bilinguals finding: C-M > C = M
  - BUT Phoneme Detection: M > C = C-M (Pinyin)

- ALSO compared C-M and C-English bilingual groups finding C-M > C-E ONLY for Tone Awareness
Conclusions

• Research results depend on:
  – the language pairs being learned
  – the order in which the language are learned
  – the education context, particularly re orthography

• Why?
  – Phonological structure of the language pairs learned
  – The salience of particular aspects e.g. syllable in M, clusters in Czech.
  – What children are taught about the spunds structure of words e.g., Pinyin; O-R vs Phoneme
Language Dyads: Evidence from Code-switching

Sean Pert
Rochdale PCT
Early Code-switching Models

- Initially, code-switching was considered to be ill-formed and a random phenomenon (Lance 1975)

- Pfaff (1979) challenged the prevailing view that intrasentential codeswitching was ‘syntactically random rather than rule-governed behaviour’.

- Poplack proposed constraints based on the similarity of the structure of the languages involved
  - Free morpheme constraint
  - Equivalence constraint

- These models studied related languages, e.g. Spanish-English

- More recent research of more diverse dyads has challenged the constraints proposed.
Does the language dyad influence the code-switching output?

- Verbs are borrowed more frequently than nouns by Panjabi-English speakers.
- English verbs are inserted using a structure available in Punjabi, where
  - a ‘noun + doing’ phrase is used to incorporate the alien verb
  - while maintaining the syntax and grammar of the monolingual Panjabi utterance.

  e.g.  
  
  me apni language learn kerni
  I want to learn my own language

  Romaine (1995)
Loan verb integration hierarchy

- Moravcsik (1975) and Wichmann & Wohlgemuth (2005) proposed that verb integration followed the pattern:

  - Light verb strategy < indirect insertion < direct insertion < paradigm transfer

- ‘...the choice in a given language of one of the four major loan-verb-accommodation patterns cannot be predicted absolutely from structural properties of the languages involved.’

- ‘...if a language has different patterns, these could correlate with the degrees to which speakers of the target language are exposed to the source language(s)’
Bilingual verbs

- Muysken (2000) classifies alien verb insertion in a similar manner to Wichmann and Wohlgemuth, but with more categories for the first stage (light verbs).

- Languages which are typologically different appear to initially use a light verb strategy.

- Muysken (2000) highlights Türker’s (1996) study of bilingual Turkish speakers where
  - ‘...the productive foreign verb + yapmak [do-INF] pattern in bilingual Turkish
  - is matched by a noun + helping verb combination in monolingual Turkish.
Bilingual verbs

- This pattern was observed by Romaine and for Urdu-English speakers by Pert and Letts (2003).

- In contrast to previous research, Pert and Letts found that bilingual children used the light verb strategy for a wide range of alien English verbs.

- *Voh point kar rahi he* (they point do doing + female is)

- Pert (2007) found that 78 children aged 3;6 to 7;5 years used 61 different English verbs in a light verb strategy.
Code-switching over time

- Patterns of verb integration may change over time.
- Gross syntactic phrase / word order may change over time:
- For example, Martin et al. (2003) studied 50 bilingual Panjabi-English children observing SVO contructions in the typically SOV Punjabi utterances, especially when code-switching was employed.
- Mundaa kick kardaa ball (boy kick do-HE-3PS ball)
Conclusions

- Different populations show progressive convergence of underlying frame over time.
- There is also a change of verb incorporation.
- The code-switching in languages with similar typology may be different to dyads with contrasting typology (see constraint models).
- Matrix language frame models help to describe code-switching,

- BUT

- Only research into language change and code-switching patterns over time can show a particular path for a particular bilingual community.