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The Effect of Language Experiences on Oral Proficiency in the Bilingual Child's Two Languages

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Introduction

The relationship between language exposure factors and learning outcomes in bilingual children has received considerable attention over recent years. Studies on infants under three acquiring two languages show a strong correlation between amount of exposure and vocabulary acquisition in each language (e.g. David, 2004; Pearson *et al.*, 1997). Parental discourse strategies have also been shown to influence the bilingual acquisition process (e.g. Döpke, 1992; Lanza, 1997). Studies on school-aged children conducted in bilingual communities reveal a strong correlation between amount of exposure to each language and children's abilities in each language (e.g. Gathercole and Thomas, 2004; Oller and Eilers, 2002). They also demonstrate how bilingual children are influenced by the language spoken by their peers (e.g. Gathercole, 2005; Verhoeven, 1991). The current study investigates the effect of three factors on bilingual proficiency in 38 French-English bilingual children from four types of bilingual family living in France.

Goals

To compare language exposure factors in bilingual children from four different family types in order to:

- explore the relationship between the quantity of current language input and oral language proficiency in each language
- evaluate the role of language output in oral proficiency
- investigate the relationship between the language of interaction with friends and children's oral proficiency

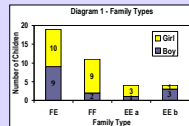
Methods

Setting

- Primary section of an international state school in France
- To be admitted to the school's English section, children are required to have an excellent working knowledge of English
- Standard French national curriculum programme is covered in 20 hours
- The British national curriculum is taught at native speaker level by native English speakers for the remaining six hours
- French is taught as a foreign language to children arriving from abroad

Participants

- 38 French-English bilinguals (23 girls, 15 boys) aged from 6;10 to 8;3 ($M = 7.6$; $SD = 4$) in the second year of primary school
- High SES families based on parents' occupations and educational levels
- 4 family types (see Diagram 1)
 - 1 native French and 1 native English speaking parent; child exposed to 2 languages since birth (FE)
 - 2 native French speaking parents who having lived in an English-speaking environment for between 3 and 5 years have been back in France for between 4 and 30 months (FF)
 - 2 English speaking parents who have been in France for more than 3 years (EE a)
 - 2 English speaking parents who have been in France for less than 18 months (EE b)



Evaluation Instruments

- Language Proficiency
 - Standardised versions of the Peabody Picture Vocabulary Test (PPVT)
 - British Picture Vocabulary Scale-II (BPVS) (Dunn *et al.* 1997)
 - L' Echelle de Vocabulaire en Images Peabody (EVIP) (Dunn *et al.* 1993)
 - Student Oral Language Observation Matrix (SOLOM)
 - English version and French translation
- Language Background and Experiences
 - Parent questionnaire
 - Child questionnaire



Procedure

- Each child met individually with the researcher for 5 separate 20-minute sessions
- BPVS and EVIP administered by the researcher
- Child questionnaire given orally by the researcher to determine:
 - child's daily language use, contact and strategies
 - child's attitudes / preferences towards each language and culture; child's perceived ability in each language
- SOLOM English and French versions completed by the children's teachers
- Parent questionnaire to determine:
 - child's current and past language exposure patterns and strategies; child's cultural allegiance and language attitudes
 - parents' language backgrounds, abilities and attitudes; cultural allegiance; occupation and educational level

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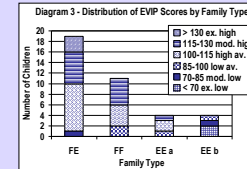
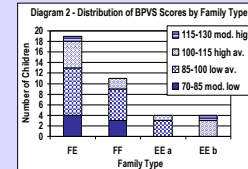
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Results

Results for Language Proficiency Scores and Percentage Quantity of Current Input

Since the language proficiency measures were found to be highly correlated, only scores from the BPVS and EVIP are reported here.

Family Type	BPVS	N	M	SD
FE	BPVS	19	96.3	12.9
	EVIP	19	117.2	13.9
FF	BPVS	11	89.8	8.6
	EVIP	11	113.1	10.7
EEa (> 3 years)	BPVS	4	95.0	6.4
	EVIP	4	106.3	11.9
EEb (< 18 months)	BPVS	4	112.0	5.6
	EVIP	4	69.0	18.7



Family Type	% input E	N	Mean	SD
FE	% input E	19	44.1	11.7
	% input F	19	55.9	11.7
FF	% input E	11	23.5	7.4
	% input F	11	76.5	7.4
EEa (> 3 years)	% input E	4	61.2	3.6
	% input F	4	38.8	3.6
EEb (< 18 months)	% input E	4	70.6	4.2
	% input F	4	29.4	4.2

Correlations between BPVS and EVIP Scores and Percentage Quantity of Current Input

	N = 19	% E	% F
BPVS	.526*		
EVIP		-.209	

*p<.05

	N = 4	% E	% F
BPVS	.303		
EVIP		-.448	

	N = 11	% E	% F
BPVS	-.017		
EVIP		.131	

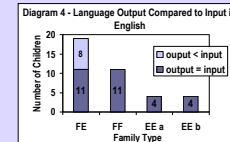
	N = 4	% E	% F
BPVS	.190		
EVIP		.059	

While contact from birth with each language has been fairly stable for FE children, children from the other family types have experienced sharp language shifts since birth which have led to wide variations in the amount of exposure they have had to each language. Clearly, this is not taken into consideration when only *current* language input is assessed.

For the FE children, the correlation between the BPVS and percentage quantity of current input is significant (see Table 3A). The corresponding correlation for French is not, but given that all but one of the EVIP scores for FE children fall in the high average score band and above (see Diagram 3), and that all the children have at least 40% exposure to French, this is not surprising.

Communication with Parents: Language Output compared to Input

Diagram 4 shows that in FF and EE a and EE b families, children speak to their parents in the language their parents speak to them. However, this is not always the case in FE families where 8 out of 19 of the children often respond in French to the English speaking parent.



	N	Mean	SD	Std. Error Mean
BPVS score parallel strategy	11	100.9	13.7	4.1
BPVS score non-parallel strategy	8	91.3	9.8	3.5

Table 4 reveals that mean BPVS scores are lower for FE children who respond in French to the English speaking parent.

An independent-samples t-test shows that the difference between means is tending towards significance ($p = 0.108$). Similar findings have been reported by Eilers *et al.* (2006) in the Miami study.

Peer Influence

As can be seen in Tables 5A and 5B, when we consider those children in the sample who clearly have a stronger oral language ($N = 30$), as assessed by the SOLOM scales completed by teachers, there is an extremely strong association between the language children use to interact with their friends both inside and outside school and their own stronger language.

		Playground Language			Total
		F / More F	E / More E		
Stronger language	French	Count	10	1	11
	% within Stronger Language		90.9%	9.1%	100.0%
	English	Count	1	8	9
	% within Stronger Language		11.1%	88.9%	100.0%
Total	Count	11	9	20	
	% within Stronger Language		55.0%	45.0%	100.0%

Fisher Exact $p = .001$

		Friends Over			Total
		F / More F	E / More E		
Stronger Language	French	Count	7	1	8
	% within Stronger language		87.5%	12.5%	100.0%
	English	Count	0	9	9
	% within Stronger language		.0%	100.0%	100.0%
Total	Count	7	10	17	
	% within Stronger language		41.2%	58.8%	100.0%

Fisher Exact $p = .001$

Conclusion

Given the small size of this sample, the results must be taken with caution. Nevertheless, certain observations can be made.

We have shown that, although quantity of current language input is a significant predictor of bilingual children's language proficiency when the language contact situation is quite stable, it is not so helpful when assessing children whose language contact experiences have undergone recent major language shifts.

When children's output in the non-dominant language of the community is substantially lower than input, oral competence in that language is reduced, underlining the importance of consistent productive language use for language maintenance.

There is a strong relationship between the choice of language of interaction with friends and children's oral language proficiency. This finding highlights the need for bilingual children to have constant access to a range of playmates in both their languages in order for their two languages to be maintained and developed.

Additional factors are currently being investigated in order to gain a deeper understanding of the potential role played by other language exposure variables which operate differentially according to bilingual children's language experiences. This research is the first part of a Ph.D. project which will examine the extent to which degree of bilingualism and language experiences influence bilingual children's cognitive development and, in particular, metalinguistic awareness in their two languages.