

Interaction patterns between children under the age of three and nursery school teachers in bilingual day nurseries

Schémas d'interaction entre enfants de moins de 3 ans et personnel éducatif en crèche bilingue

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1. Introduction

1. Einleitung

- In Germany, an increasing number of kindergartens is providing bilingual programs.
- Currently, such programs are offered by about 2% of all kindergartens in Germany (*FMKS 2014*).
- The percentage of day nurseries providing bilingual programs is unclear.
- Early immersion programs are described by Wesche (2002, p. 362) as "the most effective means of [...] second language instruction".
- The effectiveness of bilingual (immersion) programs for kindergartens has been demonstrated in a number of studies (*see, for example, Piske & Steinlen 2016 for Germany and Kersten et al. 2010 for Europe*).
- However, apparently, there are only very few studies of children learning a second language (L2) in bilingual day nurseries.

1.1 The role of L2 input

- **Factors crucial for success in L2 learning**

(e.g., Wode 2009, Piske 2013):

- the children's age, but an early start does not automatically lead to success in learning an L2
- quality and quantity of L2 input
- continuous and intensive exposure to the L2
- L2 input that is meaningful/relevant to young children

1.1 The role of L2 input

- **For the kindergarten context, the following recommendations have been made** (*e.g., Steinlen et al. 2013*):
 - The kindergarten teacher should provide intensive L2 input
 - The L2 input has to be “enriched” and variable in terms of the vocabulary and the grammar that is used.
 - The L2 kindergarten teacher always has to contextualize the L2 input provided to the children.
 - The L2 kindergarten teacher adapts her way of speaking to the children’s comprehension abilities.
 - The L2 kindergarten teacher creates a learning environment that supports multisensory learning.
 - The L2 kindergarten teacher provides opportunities for verbal and non-verbal interaction.
 - The L2 kindergarten teacher uses scaffolding techniques to support the children in learning an L2.

1.1 The role of L2 input

- **Weitz (2015) examined the role of L2 input (quantity and quality) in bilingual kindergartens (ELIAS project).**
- She distinguished between
 - structural variables (linguistic/biographical information regarding the kindergarten teachers, groups of children and input intensity)
 - process variables (examined by using an observation sheet)
 - characteristics of the situation
 - input provided by the L2 kindergarten teacher (translations, contextualization, negotiation of meaning)
 - children's responses

1.1 The role of L2 input

- **Major results obtained by Weitz (2015):**
- Observation sheets indicated quantitative differences between L2 kindergarten teachers regarding their linguistic behavior.
- Quality and quantity of L2 input strongly affect the children's comprehension of L2 vocabulary and grammar
 - input quantity is important for the children's lexical development
 - input quality is important for the children's grammatical development

1.2 Children's responses

- All of these findings regarding the role of L2 input and children's responses were obtained in studies examining children and their teachers in bilingual kindergartens.
- Similar observations have been reported for bilingual day nurseries.
- However, to date hardly any study has been carried out in a systematic way to support these observations.

1.3 Major research questions

1. Which kind of L2 input is provided to children in German-English bilingual day nurseries?
2. Intensity:
 - 2.1 Does the L2 day nursery teacher adjust her input according to the children's age? If so, how does s/he do this?
 - 2.2 Do the children respond differently to the L2 input depending on the intensity of the input?
3. Age:

Do younger and older children respond in different ways to the L2 input?

2. Method

2. Method: IQOS day nursery I

Melsdorf

Observation Checklist

Input & Interaction in daycare centers

Date:

Please use the following scores for all checklist-observations:

Codes: VL (Very Low): 1 L (Low): 2 H (High): 3 VH (Very High): 4 N.A. (Not Applicable): leave blank

General information	Name of child observed			
	Duration (sec)			
	Number of children			
	Number of <i>participating</i> L1 EYPs			
Activity	Focus on A: Language,			
Activity	Focus on B: Culture and Identity,			
Activity	Focus on C: Content other than culture and identity			
Observation	Activity (see Sammy's list)			
	L2-prompt (what does Sammy say?)			
L2 speaker (Sammy)				
Language Use	Use of L2			
	Translation by German teacher			
	Sammy accompanies actions with language			
	Sammy uses ritualized phrases (for scaffolding)			
	Varied input (complex/diverse/"rich")			
Promoting Comprehension	Adapted speech: speech rate, intonation			
	Sammy translates child's German into English			
	Sammy uses gestures, facial expressions, acting			
	Sammy uses pictures, objects, realia,			
	Sammy explains and compares			
	Sammy ensures child's comprehension			
CHILDREN				
Children's reaction	Child listens			
	Child uses English			
	Child uses 1 English word			
	Child uses 2 English words			
	Child uses 3+ English words			
	Child uses German			
	Child uses 1 German word			
	Child uses 2 German words			
	Child uses 3+ German words			
	Child mixes English+German			
	Child "babbling"			
	Child responds non-verbally			
	a) child uses gestures (nodding/shaking head, etc)			
	b) Child correctly responds to task (action)			
	c) Child understands but does opposite			
	d) Child understands but ignores prompt			
	Other children translate for child			
Child is happy with situation / is relaxed				
Additional comments				

- **Situations observed:**

- free conversations (not dependent on any specific activity)
- games or songs
- reading out to the children
- daily routines, e.g., setting the table, putting on clothes, washing hands etc.

- **Aspects examined:**

- input quantity
- input quality
- comprehension checks
- day nursery teacher's reactions to children's responses
- children's responses to the L2 input provided

2. Method: Participants

	Petterson & Findus	Raupe Nimmersatt
number of children	10	7
girls / boys	2 / 8	2 / 5
age	27 months	27 months
total time of exposure to L2 English	15 months	15 months
daily time of exposure to L2 English	6 hours	3 hours
number of interactions observed	252	92
children's L1	German	German

3. Preliminary Results

3. General results: L2 input

	Interaction Frequency of occurrence in %
Focus on content	100%
Contextualization	30%
Adaptation of language (speech rate, intonation patterns, sentence length)	66%
Enriched language (lexical and grammatical complexity)	22%
“ritualized language”	16%

3. General results: L2 input

- **Hardly any / no examples of the following categories:**
 - translation by a German-speaking day nursery teacher (5)
 - L2 day nursery teacher uses German (1)
 - comprehension checks (0)
 - explanations and comparisons (0)
 - focus on language or culture (0)

3. General results: children's responses

	Interaction Frequency of occurrence in %
Children listen	95%
Children are happy about the situation / are relaxed	100%
Children react in a non-verbal way to requests	94%
Children speak German	26%
Children speak English	1%

3. Group comparisons: L2-input (intensity)

	Petterson & Findus Frequency of occurrence in %	Raupe Nimmersatt Frequency of occurrence in %
Contextualization (facial expressions + gestures)	32%	44%
Contextualization (pictures + objects)	42%	19%
Adaptation of language (speech rate, intonation, etc.)	60%	67%
Use of “ritualized language”	14%	24%
Actions accompanied by language	1%	38%

3. Group comparisons: L2-input (intensity)

- **The more intensive the L2 input**
 - the less often the language is adapted (speech rate, vocabulary, etc.)
 - the less often “ritualized language” is used
 - the more often pictures and objects are used to contextualize the input
 - the less often facial expressions and gestures are used to contextualize language
 - the less often actions are accompanied by language
- No differences between the groups regarding translations into German.

3. Group comparisons: Children's responses (intensity)

	Petterson & Findus Frequency of occurrence in %	Raupe Nimmersatt Frequency of occurrence in %
Children listen	100%	100%
Children react non-verbally to requests	99%	80%
Children speak English	1%	1%
Children speak German	25%	29%

3. Group comparisons: Children's responses (intensity)

- **The more intensive the L2 input**
 - the more often the requests are complied with by the children
 - the larger the number of reactions to the day nursery teacher's requests
- No differences between the groups regarding the use of English
- Hardly any "babbling" is observed
- Hardly any translations from other children

3. Group comparisons: L2-input (age)

	Petterson & Findus		Raupe Nimmersatt	
	Older children 28–34 months 129 interactions	Younger children 20–25 months 122 interactions	Older children 28-34 months 54 interactions	Younger children 20-25 months 39 interactions
Contextualization	41%	33%	31%	50%
Adaptation of language	54%	66%	59%	85%
Actions accompanied by language	14%	12%	39%	36%
Use of “ritualized language”	11%	15%	24%	26%

3. Group comparisons: L2-input (age)

- **The older the children are**
 - the less often the L2 input is adapted
 - the less often “ritualized language” is used
- No differences between older and younger children regarding
 - the use of language accompanying actions
- Inconclusive results regarding the frequency of contextualizations

4. Discussion

4. Discussion: Summary I – L2 Input

- The L2 input is characterized by features of caregiver talk rather than by features of teacher talk.
- It is strongly characterized by a focus on content and by contextualization.
- The L2 day nursery teachers provide enriched input and “ritualized language”.
- Hardly any/no examples of
 - translations into German by L1 or L2 day nursery teacher
 - comprehension checks
 - linguistic or cultural explanations or comparisons
- More intensive L2 input and an older age of the children leads to
 - more enriched and less “ritualized” L2 input
 - less adaption of the L2 input (speech rate, intonation, vocabulary)

4. Discussion: Summary II – children's responses

- The children listen attentively to the L2 requests and utterances (important for language processing).
- Children mainly react non-verbally (they are still in an early phase of language learning and also mainly react non-verbally to German utterances).
- The children hardly say anything in English or mix English and German.
- The older the children are and the higher their exposure to the L2
 - the more attentive they seemed to be in interactions
 - the longer are their German utterances
 - the more willing they are to comply with a request.

4. Discussion:

Comparison with the kindergarten context

- If children react verbally, they mainly do this in German.
- However, because of the children's age non-verbal responses are much more frequent in day nurseries than in kindergartens
- At the same time responses in the L2 are much less frequent in day nurseries than in kindergartens.
- In general, the emotional bond between children in day nurseries and the day nursery teachers appears to be even more important for the learning process than in kindergartens.

5. Future Studies

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- Analysis of a much larger number of interactions involving many more children and L2 day nursery teachers.
- Comparison of different L2 day nursery teachers, programs differing in terms of intensity, children from different L1 backgrounds, etc.
- Correlation of L2 input and linguistic development (e.g., German and French in terms of vocabulary and grammar, see Weitz 2015).
- Longitudinal studies of children's development.
- Identifying and describing “promising practice” methods for bilingual day nurseries.

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