

# Current Issues in Child Bilingual Development

**Level 1 Theatre  
Australian Hearing Hub  
Macquarie University, Sydney  
26-27 July 2018**



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## Overview

More than half of children around the world grow up in a bilingual or multilingual environment. Despite this, our knowledge of how these children acquire their various languages is still very limited. This poses challenges both for assessing school readiness and academic achievement, as well as for identifying those at risk for language disorders. A range of linguistic, developmental and environmental factors interact to influence the course of language development, for both monolingual and bilingual children, raising both theoretical and applied challenges for the field. While many children eventually become competent in multiple languages, there is limited knowledge of what constitutes 'typical' bilingual language development along the way. This workshop brings together experts from a wide range of disciplines to discuss the various factors that enhance bilingual language development, and the implications this holds for both theories of language acquisition and clinical practice.

**Program**  
**Thursday, 26 July 2018**

0900-0920	Registration - Arrival Tea/Coffee (Level 1)
0920-0925	<i>Welcome to Country</i> – Chris Tobin
0925-0930	<i>Introduction of Keynote Speaker 1</i> Chair: Katherine Demuth
0930-1030	Keynote 1 Jill Wigglesworth - <i>The challenges for language learning in remote Aboriginal Australia</i>
1030-1100	Morning Tea/Coffee (Level 1)
	<i>Session 1</i> Chair: Nan Xu Rattanasone
1100-1130	Titia Benders - <i>What affects bilingual children's speech production? Evidence on the role of perception and accented input on Dutch-German bilingual children's VOTs</i>
1130-1200	Tina Whyte-Ball - <i>Bilingual experience and flexibility in lexical processing: Effects of regional accent exposure on bilingual versus monolingual infants' word recognition</i>
1200-1230	Kin Chung Jacky Chan - <i>Young children's use of mutual exclusivity and acceptance of lexical overlap in a bilingual context</i>
1230-1330	Lunch (Level 3 Terrace)
1330-1335	<i>Introduction of Keynote Speaker 2</i> Chair: Jae-Hyun Kim
1335-1435	Keynote 2 Erika Hoff - <i>Short-and long-term outcomes of early dual language exposure in children of immigrant families</i>
1435-1505	Afternoon Tea/Coffee (Level 1)
	<i>Session 2</i> Chair: Laurence Bruggeman
1505-1535	Todd Gibson - <i>The receptive-expressive gap in Spanish-English bilingual children: A longitudinal investigation</i>
1535-1605	Nan Xu Rattanasone - <i>Produced but not productive: Early Sequential Bilinguals' knowledge of inflectional morphology</i>
1605-1635	Speed Poster Presentations
1635-1800	Poster Session with drinks and canapes (Level 1 and Room 1.620)

**Program**  
**Friday, 27 July 2018**

0930-0955	Arrival Tea/Coffee (Level 1)
0955-1000	<i>Introduction of Keynote Speaker 3</i> Chair: Nan Xu Rattanasone
1000-1100	Keynote 3 Johanne Paradis - <i>Children learning English as an L2 from diverse L1 backgrounds: Individual difference factors and long- term outcomes</i>
1100-1130	Morning Tea/Coffee (Level 1)
	<i>Session 3</i> Chair: Titia Benders
1130-1200	Sithembinkosi Dube - <i>Extensive L2 reading predicts larger vocabulary size in 9-11 year-old Mandarin learners of English</i>
1200-1230	Alan Rumsey - <i>Trajectories of Tok Pisin and local language acquisition in the Western Highlands of PNG</i>
1230-1330	Lunch (Level 3 Terrace)
1330-1335	<i>Introduction of Keynote Speaker 4</i> Chair: Rosalind Thornton
1335-1435	Keynote 4 Theo Marinis - <i>Language &amp; literacy development in multilingual children in India</i>
1435-1500	Afternoon Tea/Coffee (Level 1)
1500-1505	<i>Introduction of Keynote Speaker 5</i> Chair: Caroline Jones
1505-1605	Keynote 5 Carmel O'Shannessy - <i>Bilingual acquisition and language change: a case study of Warlpiri and Light Warlpiri</i>
1605-1615	Closing Remarks – Katherine Demuth

## ***Keynote Presentation***

### **The challenges for language learning in remote Aboriginal Australia**

Gillian Wigglesworth  
*University of Melbourne*

Indigenous Australians comprise only 3% of the total population of Australia, but a much greater proportion of the population in certain areas. The language ecologies of the wide range of communities the children are living in is complex, and highly variable and each community differs considerably from the others in terms of its individual language ecology. While we know little about how children acquired English as a second language, we know even less about how children in these remote communities acquire English in a context more akin to learning English as a Foreign Language than to one in which English is the second language. Several issues impact on the context of education for the children in these remote communities; they have limited, if any, access to bilingual education; there is often minimal discussion with communities about their preferences; there tends to be high turnover of teachers who lack specific relevant training, particularly in language teaching; and standardized assessments are mandated and used regularly. These conditions contribute to a situation which presents significant challenges for governments, education departments and schools but it is crucial that these challenges are met, and not further exacerbated by the policy decisions that are made.

## ***Session 1***

### **What affects bilingual children's speech production? Evidence on the role of perception and accented input on Dutch-German bilingual children's VOTs**

Antje Stoehr<sup>1,2</sup> Titia Benders<sup>\*3</sup>, Janet G. van Hell<sup>4</sup>, and Paula Fikkert<sup>2</sup>  
<sup>1</sup>*Basque Center on Cognition, Brain and Language*, <sup>2</sup>*Radboud University*,  
<sup>3</sup>*Macquarie University*, <sup>4</sup>*The Pennsylvania State University*

Bilingual children produce speech differently from monolinguals in at least on language. This study investigates whether Dutch-German bilingual children's deviant voice onset time (VOT) productions are rooted in their perception and non-native input. Experiment 1 assessed whether bilingual children's language-general production of voiced plosives is rooted in language-general perception. Children associated phonologically voiced plosives with longer VOTs in German than in Dutch, providing evidence for language-specific representations of voiced plosives. Experiment 2 assessed whether bilingual children's non-target like but language-specific productions of voiceless plosives are rooted in the accented input from their L1-German/L2-Dutch mothers. We found individual-level associations between the

VOTs of bilingual children and their own mothers for Dutch and German voiceless plosives, but not voiced plosives /b/ and /d/. These results show that bilingual children's language-general accented productions can be based in language-specific perceptual representations, and that their deviant productions may be due to accented input. Articulatory practice and accented input must thus be considered as factors in bilingual phonological development.

**Bilingual experience and flexibility in lexical processing:  
Effects of regional accent exposure on bilingual versus monolingual infants'  
word recognition**

Tina Whyte-Ball<sup>\*1</sup>, Catherine Best<sup>1</sup>, Karen Mulak<sup>1,2</sup>, and Marina Kalashnikova<sup>1</sup>

<sup>1</sup>*MARCS Institute, Western Sydney University*

<sup>2</sup>*Department of Hearing and Speech Sciences, University of Maryland*

Evidence suggests that bilinguals differ from monolinguals in the development of speech perception and word learning. We aimed to establish whether short-term pre-exposure to an unfamiliar accent has different effects on their recognition of familiar words in that accent. We fit a mixed-effect linear model to toddlers' log-transformed looking time with test trial type (unfamiliar vs. familiar words), test accent (Jamaican Mesolect (JaME) vs. Australian English (AusE)), and language experience (bilingual vs monolingual) as fixed effects, and participant and test order as random effects. A main effect of familiarity revealed a significant preference for familiar over unfamiliar words. A significant test accent x language experience interaction indicated a significant preference for the unfamiliar accent by bilinguals. Additionally, a significant test accent x language experience x passage accent interaction revealed that bilinguals looked longer than the monolinguals for both test accents following the JaME passage, and for the JaME accent test words following the AusE passage. In contrast, the monolinguals looked longer to the AusE test words following the AusE passage only. Thus, bilinguals show a novelty preference for unfamiliar/new speech features, possibly indicating more flexibility than monolinguals in processing accent variation.

**Young children's use of mutual exclusivity and acceptance of lexical overlap  
in a bilingual context**

Kin Chung Jacky Chan<sup>\*</sup> and Padraic Monaghan

*Lancaster University*

Mutual exclusivity (ME) is a word learning strategy that guides young children to establish one-to-one word-referent pairings. However, bilingual children have to accept lexical overlap (LO), forming two-to-one word-referent pairings. We investigated whether monolingual and bilingual preschoolers would apply ME or accept LO differently in a one-language and a two-language context using a

touchscreen computer. Results of the immediate test reveal that the children performed better in the ME than LO task and were more likely to accept LO in the two-language condition. In the delayed test, performance was better with words introduced in the two-language condition. In addition, older children tended to remember better words that were ostensibly taught rather than those that required the application of ME. These results suggest that monolingual and bilingual preschoolers are sensitive to the linguistic environment around them and can adapt their word learning strategies to cope with the demands of different learning situations. These results are also in line with those of previous studies that showed that preschoolers learn ostensibly taught words more effectively.

### ***Keynote Presentation***

#### **Short-and long-term outcomes of early dual language exposure in children of immigrant families**

Erika Hoff

*Florida Atlantic University*

It is widely believed that simultaneous exposure to two languages from birth results in the achievement of balanced bilingualism and native-like proficiency in two languages. Findings from two studies of Spanish-English bilinguals in South Florida contradict this view. Using longitudinal data collected from the age of 2 ½ to 5 years, I describe the variable outcomes of early dual language exposure and sources of variance in bilingual development. Using cross-sectional data from 6-year-old and adult Spanish-English bilinguals with early dual language exposure, I describe patterns of bilingual proficiency that argue for an account of language development in which proficiency at each age depends not only on early experience but also on continued and concurrent language use.

### ***Session 2***

#### **The receptive-expressive gap in Spanish-English bilingual children: A longitudinal investigation**

Todd Gibson<sup>\*1</sup>, Elizabeth D. Peña<sup>2</sup>, Lisa Bedore<sup>3</sup>

<sup>1</sup>*Louisiana State University*, <sup>2</sup>*University of California at Irvine*, <sup>3</sup>*Temple University*

Bilingual children often have better receptive than expressive standard scores on measures of semantic knowledge, even after controlling for the inherent differences in difficulty between the two modalities. Participants included 106 US Spanish-English bilingual children and their caregivers. We predicted that practice (i.e., increased frequency of occurrence) would strengthen semantic and phonological representations over the course of a year resulting in a diminution of the gap in both



English and Spanish. Repeated measures ANOVA revealed that overall scores were better in Spanish than English, but the magnitude of the gap was similar in the two languages. Although overall scores improved across the year (more in English than Spanish), the gap's magnitude remained statistically the same. Chi square post-hoc tests showed that some children's gap diminished over the year, some grew, some never presented with a gap, and some had a gap at both pretest and posttest. It appears that when receptive performance is on a significant upswing (i.e., not stabilized), practice is not sufficient to close the gap. Clinicians should expect a gap for typically developing Spanish-English bilingual children in both of their languages during kindergarten and first grade.

### **Produced but not productive: Early Sequential Bilinguals' knowledge of inflectional morphology**

Nan Xu Rattanasone<sup>\*1,2,3</sup>, Benjamin Davies<sup>1,2,3</sup>, Tamara Schembri<sup>4</sup>, and Katherine Demuth<sup>1,2,3</sup>

<sup>1</sup>*Department of Linguistics*, <sup>2</sup>*Centre for Language Sciences, Macquarie University, Sydney, NSW, Australia*, <sup>3</sup>*ARC Centre of Excellence in Cognition and its Disorders*, <sup>4</sup>*Toybox Labs, Sydney, NSW, Australia*

Mandarin-speaking children have demonstrated challenges in acquiring second language (L2) English inflectional grammar. In study 1, using elicited imitation task, we showed that Mandarin-speaking pre-schoolers have acquired good L2 phonology but are challenged by infrequent plural forms, suggesting L2 morphology is difficult to acquire. Study 2, using an elicited production similar to the 'wugs' task, showed Mandarin-speaking preschoolers did not have productive use for plural morphology. Study 3, using a 2AFC perception task on an iPad, supported the production findings in study 2. Together these studies suggest that while Mandarin-speaking preschoolers have acquired good L2 phonology, they have not yet developed good representations of L2 morphology. This suggests that children speaking an isolating L1 may not be sensitive to morpheme boundaries in L2 words, raising the question of how representations for inflectional grammar might develop for these bilinguals and if and how this might differ from that of monolinguals.

### ***Keynote Presentation***

#### **Children learning English as an L2 from diverse L1 backgrounds: Individual difference factors and long-term outcomes**

Johanne Paradis  
*University of Alberta*

This keynote draws on 10 years of research with over 300 English L2 learners of various ages and L1 backgrounds to show that these popular beliefs are myths. English L2 learners show huge individual variation in their rates of English L2 acquisition and take years to approach their monolingual peers for vocabulary, morphology, syntax and narrative skills. Sources of these individual differences include both child-internal and child-external factors, indicating that multiple mechanisms underlie child L2 acquisition. Child-internal factors include age of acquisition, L1 typology and language learning aptitude. Proximal external factors (quantity and quality of L2 input) are inter-related with distal external factors (maternal education and L2 fluency, and the socio-emotional well-being of family members). The protracted rate of acquisition and the sensitivity of children's developmental trajectories to these factors argue for better and more targeted ESL support. Not all English L2 learners converge with their monolingual peers by young adulthood for morphological knowledge, which suggests we need to re-consider the assumption of uniform outcomes for early L2 learners.

### ***Session 3***

#### **Extensive L2 reading predicts larger vocabulary size in 9-11 year-old Mandarin learners of English**

Sithembinkosi Dube  
*Department of Linguistics, Macquarie University*

The current study explored whether the amount of L2 spoken at home and quantity of print material correlate with vocabulary size in high SES Mandarin L2-English-speaking children. Vocabulary size was measured using the Peabody Picture Vocabulary Test (PPVT) while data on language-related activities that the children engaged in at home was collected using Parental reports. The study revealed that only the quantity of print media correlated with vocabulary size, and significantly explained children's large vocabulary size. This suggests that extensive L2 reading, at home, boosts vocabulary size and may be a good buffer for AoA and SES effects generally thought influence L2 outcomes. These findings have implications for L2 teaching and call for more research to investigate how children's language experiences in the home environment impact their L2 development.

## **Trajectories of Tok Pisin and local language acquisition in the Western Highlands of PNG**

Alan Rumsey\* and Dan Devitt  
*Australian National University*

Since 2004, we have been engaged in longitudinal acquisition studies of Ku Waru, a Papuan language of Highland PNG. Most Ku Waru speakers are also fluent in the regional lingua franca Tok Pisin. All of the preschool children we recorded spoke almost entirely in Ku Waru in the sessions. In 2013 there was a shift on the part of some parents to using Tok Pisin along with Ku Waru when addressing their children, and a corresponding earlier onset of bilingual language learning. This shift had been motivated in part by a national shift in language policy away from bilingual education back to the English-only policy. Parents believed that their early use of Tok Pisin at home would facilitate the children's eventual learning of English but thought it important for their children to keep learning Ku Waru, so they continued to speak it to them, interspersed with Tok Pisin. In the actual interactions recorded in 2013, however; the switches from Ku Waru to Tok Pisin were initiated mainly by the children. We present comparable data from the same children during 2014-2016. These data show a decrease in use of the Tok Pisin by all of the target children who had been using it in interactions with their parents, and very little use of Tok Pisin by the children when interacting with each other. We offer an ethnographically based account of the overall language ecology in which these patterns are found.

### ***Keynote Presentation***

## **Language and literacy development in multilingual children in India**

Theo Marinis  
*University of Konstanz*

In this talk I will present data from the MultiLiLa project that addresses how primary school children in India develop language, literacy, and mathematical skills <<https://www.mam.mml.cam.ac.uk/>>. This project explores how the complex dynamics of social, economic and geographical contexts on the one hand, and the availability of multiple languages on the other hand, affect the learning outcomes for multilingual children living in urban slums in Delhi and Hyderabad as well as in remote rural areas of Bihar. In this talk I will focus mainly on the language factors. Children participated in language tasks measuring their vocabulary, grammatical abilities and literacy. We also mapped the children's language history and whether or not the language(s) spoken at home are also used in the school. I will address the role of mother tongue education in the development of language and literacy skills. The findings have important implications for the education of multilingual children across the globe.

***Keynote Presentation***

**Bilingual acquisition and language change:  
A case study of Warlpiri and Light Warlpiri**

Carmel O'Shannessy  
*Australian National University*

This talk explores a case study in a remote community in the Northern Territory where the children's first languages are the traditional language, Warlpiri, and a mixed language, Light Warlpiri. Light Warlpiri systematically combines the nominal structure of Warlpiri with the verbal structure of Kriol and English, with innovations added to the verbal structure, probably by an earlier cohort of bilingual children. Lexical items are drawn from all sources. The new way of speaking emerged in the speech of young bilinguals about 40 years ago. As the children grow up, English-based varieties are added to their repertoire. The situation raises questions about bilingual acquisition both in the past and now. I will trace the role of young bilingual speakers in the emergence of Light Warlpiri and show some aspects of how they manage their two first languages as they grow up.

## Poster Abstracts

### **1. Who are Australia's multilingual children? Insights from the Longitudinal Study of Australian Children (LSAC) and the Longitudinal Study of Indigenous Children (LSIC)**

Sharynne McLeod and Sarah Verdon\*  
*Charles Sturt University, Australia*

We present the data from two longitudinal studies giving insight into Australia's multilingual children: Longitudinal Study of Australian Children (LSAC) and Longitudinal Study of Indigenous Children (LSIC). Australian children typically spoke English. Over one-fifth (21.9%) were regularly spoken to in a language other than English. Both monolingual and multilingual Australian children had similar language, literacy, numeracy and socio-emotional outcomes at ages 6-7 and 8-9 years; providing support for home language maintenance. Indigenous Australian children spoke between one and eight languages including: English, Indigenous languages, creoles, foreign languages (e.g., Greek), and sign languages. Children who spoke an Indigenous language were more likely to live in moderate to extreme isolation. Indigenous children's language environments were rich, with many family members and friends telling oral stories in English and Indigenous languages, reading books, and listening to the children read. Almost a third of families wanted to pass on their cultural language, and many would like their child to learn an Indigenous language at school.

### **2. Preliminary findings in sequential language development of Dutch children in Australia**

Marrit Janabi\*<sup>1</sup>, Alison Purcell<sup>1</sup>, Elisabeth Duursma<sup>2</sup>, Margot Bochane<sup>3</sup>,  
 Hans Bogaardt<sup>1</sup>

<sup>1</sup>*Faculty of Health Sciences, The University of Sydney, Sydney, Australia;* <sup>2</sup>*School of Education, Faculty of Social Sciences, University of Wollongong, Wollongong, Australia;* <sup>3</sup>*Faculty of Health Sciences, Hanze University of Applied Sciences, Groningen, The Netherlands*

We evaluated factors influencing expressive and receptive language development of Dutch-English children in Australia over 4 years. Standardized questionnaires (ALEQ / ALDEQ) and language assessments (CELF4 / PPVT4) were used to track the children's expressive and receptive language skills in both languages (Dutch/English). When children's parents frequently speak Dutch with their children, these children have significantly better Dutch skills in receptive and productive language. In the group of children that spoke frequently Dutch at home, the development of English skills seems not to be different from children who speak also English at home. Frequent storytelling in Dutch and reading in Dutch are

important factors for development of the mother tongue. In contrast, English language development seems to be independent from the frequency and intensity of languages spoken at home, as other factors might influence this development more significantly, like exposure to the English language at Australian primary schools.

### **3. Foreign language learning in children with poor literacy skills**

Alexa von Hagen<sup>\*1</sup>, Saskia Kohnen<sup>2</sup> and Nicole Stadie<sup>3</sup>

<sup>1</sup>*International Doctorate for Experimental Approaches to Language and Brain (IDEALAB), University of Groningen, The Netherlands; University of Potsdam, Germany; University of Trento, Italy; University of Newcastle, United Kingdom; Macquarie University, Australia;* <sup>2</sup>*Macquarie University, Australia;* <sup>3</sup>*University of Potsdam, Germany*

We assessed spoken and written native and foreign language skills in a group of 11-12 year old German-speaking children with typical and poor literacy skills (n = 64). Children had received English as a foreign language instruction for 3 years. Our findings show a complete mismatch between the group and individual performance of children with poor literacy skills. At an individual level, more than half of the children with poor literacy skills (56%) were just as successful as their peers with typical literacy skills on all foreign language measures. Furthermore, native language skills and foreign language learning motivation emerged as significant sources of individual differences in the foreign language attainment of children with poor literacy skills. These results question the suitability of group comparisons to capture individual differences in the foreign language attainment of children with poor literacy skills and to guide educational implications. Moreover, the identification of significant sources of individual differences is a first step in better understanding why some children with poor literacy skills struggle in learning a foreign language and others are just as successful as their peers with typical literacy skills.

### **4. How do preschool staff communicate with children with English as an additional language?**

Kin Chung Jacky Chan<sup>\*1</sup>, Padraic Monaghan<sup>1</sup>, and Marije Michel<sup>2</sup>

<sup>1</sup>*Lancaster University,* <sup>2</sup>*Utrecht University*

The present study aimed to investigate how preschool staff communicate with preschoolers with English as an additional language (EAL) and how this affects language learning. We audio- and video-recorded a preschool classroom for 1 hour per week for 4.5 months and observed whether and how preschool staff tailor their interaction to children with different linguistic backgrounds (monolingual English vs. EAL) and levels of language proficiency. Children's language proficiency level was assessed by the Clinical Evaluation of Language Fundamentals – Preschool 2

(CELF-P2) towards the beginning (T1) and the end (T2). Analyses showed that the staff tended to use shorter utterances with EAL than monolingual English children. There was a negative correlation between staff's MLU and children's language proficiency level at T1 for EAL, but not monolingual English, children. EAL children's improvement on CELF-P2 was associated with receiving shorter utterances, whereas that of monolingual English children was associated with receiving longer utterances. This observed difference was not due to EAL children's lower CELF-P2 scores at T1, allowing them a possibility for greater improvement. These results suggest that once a child's language has developed to a certain level, input with increased complexity would be beneficial for further development.

### **5. Examining the influence of school-level attendance rates on achievement in the 'red-dirt' context of very remote Aboriginal communities**

Leonard A. Freeman

*University of Melbourne, School of Languages and Linguistics; ARC Centre of Excellence for the Dynamics of Language*

Informed by second language acquisition theory, this project investigated whether factors such as remoteness or the proportion of culturally and linguistically diverse students enrolled moderates the influence that school-level attendance rates have on the National Assessment Program - Literacy and Numeracy (NAPLaN) achievement rates for Northern Territory schools. Such an interaction effect, would be said to exist when the effect of the explanatory variable (school-level attendance) on the dependent variable (school-level NAPLaN achievement) differs depending on the value of a third variable. Findings regarding the degree to which the proportion of schools' enrolment are from an Aboriginal background or speak an Aboriginal language as their first language moderate the influence that school-level attendance has on school-level rates of literacy and numeracy achievement are presented. By examining the statistical associations between school-level attendance and achievement rates, this poster presentation questions the rationale of current policies which problematise student attendance rates while overlooking that in many very remote communities Aboriginal students learn English as a foreign language.

### **6. Developing ERLI: the Early Remote Language Inventory**

Caroline Jones<sup>\*1</sup>, Jaidine Fejo<sup>1</sup>, Eugenie Collyer<sup>1</sup>, Caroline Hendy<sup>2</sup>

<sup>1</sup>*The MARCS Institute for Brain, Behaviour and Development, Western Sydney University,* <sup>2</sup>*Australian National University*

Checklists of early vocabulary and gestures are a well-known and reliable way to measure young infants' language development in research and in clinical or educational settings (e.g. the MacArthur Bates Communicative Development Inventories). For infants in bilingual families, whose early lexical knowledge is

distributed across both languages, checklists provide estimates of the size and shape of this knowledge if caregivers check items off if understood or produced in either home language. In this poster we evaluate data on suitability for multilingual families and in screening in the context of the very first checklist for infants in northern Indigenous Australia, the Early Remote Language Inventory (ERLI), a short checklist designed for children aged 0-3 years. We are developing the ERLI to cater for remote language contexts in northern Australia: Kriol, an English-based creole, mixed languages, traditional languages, plus English and many other community languages. The ERLI is built on parent interviews (2014-present) and research into parent preferences for baby talk and gesture in the context of high community levels of hearing loss. We report in this paper on our progress to date in developing the ERLI, and industry collaborations through which we are norming and validating it.

## **7. Towards Communicative Development Inventories (CDIs) for Southern African children**

Michelle Pascoe<sup>1</sup>, Olebeng Mahura\*<sup>1</sup>, Heather Brookes<sup>1</sup>, Tessa Dowling<sup>1</sup>,  
Frenette Southwood<sup>2</sup>, Helena Oosthuizen<sup>2</sup>, Naledi Kgolo<sup>3</sup>, Rose Letsholo<sup>3</sup> and  
Katie Alcock<sup>4</sup>

<sup>1</sup>*University of Cape Town*, <sup>2</sup>*Stellenbosch University, South Africa*, <sup>3</sup>*University of Botswana*, <sup>4</sup>*Lancaster University, UK*

We describe the work of the Southern African Communicative Development Inventory (CDI) team, focusing on the methodology used to develop CDIs for a range of languages spoken in the region, and present preliminary findings. The aim of the project is to adapt and validate CDIs in six Southern African languages (IsiXhosa, Setswana, Sesotho, Xitsonga, South African English and Afrikaans). Six teams each focus on a specific language, and follow a shared protocol for CDI development and validation. The methodology includes a series of focus groups with key informants to adapt/translate the tool; cross-sectional pilot studies involving individual interviews with parents of young children, and naturalistic language sampling of typically developing children. From an applied perspective, these CDIs will respond to the call of Southern African speech and language therapists for more valid and reliable language assessment and early identification tools. From a theoretical perspective they will facilitate more systematic investigation of young children's language development across a range of languages.



## **8. Intervention for bilingual children's speech sound disorders: A description of three English/isiXhosa speaking children**

Olebeng Mahura\*, Katherine Rossouw, Michelle Pascoe  
*University of Cape Town*

We describe the sound systems of three isiXhosa-English bilingual children aged 3;0 to 4;2 living in Cape Town. The children were referred for speech and language therapy (SLT) services due to concerns about their speech development. English assessment was undertaken using the Diagnostic Evaluation of Articulation and Phonology and isiXhosa speech assessment used Masincokoleni. The Intelligibility in Context Scale was used to evaluate the participants' intelligibility in daily life. Participants' speech was described in terms of consonant and vowel inventories, phonological processes and categorised according to Dodd's diagnostic subcategories. This study contributes knowledge of how isiXhosa-English bilingual speech development likely differs from monolingual development of each of these languages; it provides a framework that SLTs working with isiXhosa-English bilingual children with speech sound disorders can use in planning for intervention. It also contributes to research investigating changes occurring in sound systems of bilingual children following intervention.

## **9. Intervention for a bilingual child with speech disorder**

Gayle Hemsley and Alison Holm  
*Griffith University*

This poster will explain clinical management for Kim, a child with unintelligible English speech, who first acquired Vietnamese and then Australian-English at school. Kim presented with a history of untreated speech difficulty in Vietnamese that had not entirely resolved. Kim started learning English when he was approximately 8 years old. After a year's exposure to English at school, his English remained largely unintelligible. Assessment indicated a high degree of inconsistency in production of English words. Speech pathology intervention targeting English phonological planning effectively resolved Kim's speech difficulty. Kim's case confirms that it is vital to conduct a thorough speech assessment in both of a bilingual child's languages. Differential diagnosis should be underpinned by an understanding of typical bilingual phonological development and a theoretical psycholinguistic speech-processing framework. For Kim, limited English exposure and the cognitive demands of the classroom may have overwhelmed his phonological processing capacity so that he stored imprecise phonological representations. This may have resulted in underspecified or degraded phonological plans and therefore inconsistent word production.

## **10. The very first steps of the early L2 acquisition of French phonology: Evidence from a nonword repetition task**

Laetitia de Almeida

*Dynamique du Langage, UMR 5596, Lyon, France*

The purpose of the present study is threefold: to investigate how long it takes for early L2 learners (eL2) to acquire phonology, to identify the phonological structures that are more problematic for eL2 children and to evaluate the link between eL2 phonological performance and receptive vocabulary size. Elicited productions were collected using a nonword repetition (NWR) task from 17 newly-immigrated children. They were also given a French standardized test for receptive vocabulary. The children performed better on the NWR task than on the vocabulary task. Their performance on the NWR task was not related to exposure to French or to the performance on the vocabulary task. It was correlated to their performance at word-medial codas and branching onsets. Our results confirm that eL2 phonological acquisition takes place quite early and that complex syllable structures can be difficult for eL2 learners.

## **11. Executive function and early lexical development of Luso-French bilingual toddlers**

Daniela Valente<sup>1</sup>, Sophie Kern<sup>1</sup>, and Christophe dos Santos<sup>2</sup>

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We observed early lexical development in bilingual toddlers to explore the link between Vocabulary Size (VS) and cognitive skills. 22 bilingual French-EP toddlers living in France and in Switzerland were included in a cross-sectional study. Their language development was assessed with the French and Portuguese Communicative Development Inventory (adaptations of MacArthur-Bates CDI). Parental questionnaires were also used to assess language dominance (PaBiQ), developmental stages (ASQ-3™) and executive functions (BRIEF-P). We calculated the total words in each language, the total vocabulary (TV) in each language and the total conceptual vocabulary (TCV) and compared them with the respective norms for monolinguals. The results showed that most of our children Their TV and TCV exceeded the vocabulary of monolinguals. Expected correlations between vocabulary size (CDI) and the ASQ-3 Communication Scale both in EP and in French appeared. The same strong link is found between ASQ-3 Problem Solving scale and BRIEF-P Working Memory scale. No correlation between TV and BRIEF-P Working Memory scale was found, neither between TV and BRIEF-P inhibition scale. Our results shed light on processes of bilingual language development, and

help change beliefs about negative effects of bilingualism on children's language development.

## **12. Vocabulary matters! The relationship between verbal fluency and non-verbal measures of inhibitory control in monolingual and bilingual children**

Gloria Pino Escobar\*<sup>1,2</sup>, Marina Kalashnikova<sup>1</sup>, and Paola Escudero<sup>1,2</sup>

<sup>1</sup>*The MARCS Institute for Brain, Behaviour and Development, Western Sydney University;* <sup>2</sup>*ARC Centre of Excellence for the Dynamics of Language*

Being bilingual from an early age has an impact on the development of children's general cognitive and linguistic skills. To investigate the link between these two domains, this study assessed inhibitory control processes (i.e., interference suppression and response inhibition) and language retrieval abilities (i.e., verbal fluency) in school-aged monolingual and bilingual children with similar English receptive vocabulary size. All children completed two Verbal Fluency Tasks (VFTs), letter and category, and two measures of inhibitory control, the Dimensional Card Change Sort (DCCS) task and the Day-Night Stroop task (Day-Night). Bilinguals outperformed monolinguals in the VFTs, but performance was similar on the inhibitory control measures. Both vocabulary proficiency and general inhibitory control skills underlie monolingual and bilingual children's performance on VFTs. All VFT scores were related to children's English vocabulary size, but letter VFT scores were related to DCCS performance and category VFT scores related to Day-Night performance. This suggests that interference suppression skills are engaged during the letter VFT task, while the category VFT task engages response inhibition skills. Furthermore, these results demonstrate that vocabulary proficiency plays a fundamental role in comparing monolingual and bilingual VFT performance. The bilingual advantage found in this study seems to have escaped previous studies that did not account for vocabulary size in populations of bilingual and monolingual school-aged children.

## **13. School-aged sequential bilingual children exhibit no “bilingual verbal deficit”**

Zhen Zeng

*The MARCS Institute for Brain, Behaviour and Development, Western Sydney University*

The present study compared the 6-12 year-old primary school monolingual children (n=20) and early sequential bilingual (ESB) children (n=20) in their inhibitory control skills, verbal (retrieval) fluency, receptive vocabulary, expressive vocabulary as well as TOT rates. Results indicated that, the primary school ESBs were on par with their monolingual peers in lexical retrieval performance, and were advantageous in inhibitory control. It was concluded that, under similar social

conditions and English exposure in the school settings, the ESBs were able to catch up with their monolingual counterparts in their lexical retrieval abilities despite growing up as sequential and not simultaneous bilinguals.

#### **14. A multi-tool protocol for the collection of speech data and the assessment of phonological and phonetic development in bilingual toddlers**

Marie Philippart de Foy\*<sup>1,2,3</sup>, Véronique Delvaux<sup>1,2,3</sup>, Kathy Huet<sup>1,2</sup>, Morgane Monnier<sup>1,2</sup>, Myriam Piccaluga<sup>1,2</sup>, Bernard Harmegnies<sup>1,2</sup>

<sup>1</sup>*Institut de Recherche en Sciences et Technologies du Langage, Université de Mons, Belgique;* <sup>2</sup>*Service de Métrologie et Sciences du Langage, Université de Mons, Belgique;* <sup>3</sup>*Fonds National de la Recherche Scientifique, Bruxelles, Belgique*

We have developed an original observational paradigm involving different tools to collect a set of complementary data (self-reported and speech production data) from children longitudinally. Self-reported data were gathered via three parental questionnaires to characterise each participant's linguistic profile, to document their lexical and morphosyntactic development in both languages, and to estimate children's intelligibility. Then, speech productions were collected via a self-developed word-naming task in French. All corpus items were selected based on psycholinguistic and phonological criteria. The corpus involves a particular presentation order of the items, organised by increasing age of acquisition and progressive phonological complexity. We will present the preliminary results of our first analyses based on two data sets collected at four-months intervals.

#### **15. Spoken Language Analysis Toolkit Ecosystem (SLATE) – an app for continuous tracking of pronunciation parameters in the field**

Enyi Tan, Balamurali B T, Simon Lui, Jer-Ming Chen  
*Singapore University of Technology & Design*

We present the Spoken Language Analysis Toolkit Ecosystem (SLATE), a smartphone based application designed for phoneticians and speech researchers “in the field”. By using various digital signal processing techniques interfaced on a smartphone, the app is able to dynamically track fundamental frequency (f0), first and second formants (F1, F2), and their associated relative formant intensity in real-time, for a variety of vowel sounds. To further aid its ‘ecological’ objective of performing speech measurements “in the field”, the app employs voice activity detection coupled with an intuitive graphical user interface, thereby allowing the researcher to dynamically annotate the speech data stream on a smartphone “on the fly” and seamlessly upload the extracted speech parameters onto a server for further analysis and easy archival. Details of the app's performance will be presented, and

we offer the app as a powerful and accessible speech data collection tool which may better support researchers “in the field”.

**16. Separate bilingualism: An unspoken agreement between educator and mothers of Latino preschool dual language learners**

Delis Cuéllar

*University of Wisconsin-Madison*

The present qualitative study documents and examines ideologies that preschool, American-born, Spanish-speaking, sequential bilingual, children of Mexican immigrants encounter during one school year in their home and at their early childhood and education program in the state of Arizona. Utilizing interview data with the adult participants and participant observation notes at the preschool and in fieldtrips, incongruent language ideologies of children's early language development were identified. Evidence supports the adherence of teacher and mothers to the idea of separate bilingualism, which is the idea that language acquisition and development be heavily influenced by the prevailing or dominant language in an environment. For the children in this study, English was to be developed at school while Spanish was to be learned home, without intermixing or combining languages. The scope of findings are discussed in terms of heritage language maintenance, children's refusal to speak the language of their family, English-only educational policy, and translanguaging.

## Keynote Speaker Biographies



**Professor Erika Hoff**  
**Florida Atlantic University**

Erika Hoff is Professor of Psychology at Florida Atlantic University. Her research addresses the relations among properties of children's early environments, their language experience, and their language development. She has studied effects of maternal education and effects of dual language exposure on children's language growth. Her recent work focuses on the language development of children from Spanish-speaking homes in South Florida, in the US. She is a member of the US Bridging the Word Gap Research network, which focuses on interventions to remedy SES-related disparities in children's early experience and language skills. She is Principal Investigator of a NICHD-funded longitudinal study of Spanish-English bilingual children in South Florida. She is the author of numerous articles and chapters and the editor of multiple books on early language development, including *Research Methods in Child Language* and, with Peggy McCardle, *Childhood Bilingualism: Research on Infancy through School Age*.



**Professor Theo Marinis**  
**University of Konstanz**

Theo Marinis is Professor of Multilingualism at the University of Konstanz. His research focuses on language acquisition and processing across populations of typically and atypically developing learners and aims to uncover the nature of language processing in typical and atypical language development. His research has been funded by research councils, such as the ESRC (Real-time processing of syntactic information in children with English as a Second Language & children with Specific Language Impairment), ESRC-DFID (Multilingualism & Multiliteracy <https://www.mam.mml.cam.ac.uk/>) and the NWO (Cross-linguistic study of the production and processing of grammatical morphemes in L2 children compared to children with Specific Language Impairment), and also by the British Academy, the Nuffield Foundation and the Onassis Foundation. He was part of the COST Action IS0804 and led the development of the LITMUS Sentence Repetition tasks for multilingual children across a large range of languages. He is

currently leading the ESRC-GCRF project 'ProLanguage' that addresses the protective role of language in global migration and mobility [<https://research.reading.ac.uk/prolanguage/>] and the EU project 'MultiMind' that provides multi-disciplinary training on multilingualism to early stage researchers in Europe <https://www.multilingualmind.eu/>).



**Dr Carmel O'Shannessy**  
**Australian National University**

Carmel O'Shannessy is a Lecturer in the School of Literature, Languages and Linguistics at the Australian National University, having moved there from the University of Michigan, where she had been since 2007. In the 1990s her background as an ESL teacher and Applied Linguist took her to work in remote Indigenous schools in Australia's Northern Territory, in the areas of Indigenous language maintenance and education. While working in the Warlpiri-English bilingual education program in the Warlpiri community of Lajamanu she noticed what sounded like extensive code-switching by younger speakers, and with the community's approval was keen to investigate how young people were speaking. She subsequently completed her PhD in Linguistics at the University of Sydney (Australia) and the Max Planck Institute for Psycholinguistics (The Netherlands) in 2007, with documentation of the genesis and development of Light Warlpiri, a mixed language that had recently emerged in the community. Within the areas of language contact and change and language acquisition, her research continues to document children's bilingual acquisition and maintenance of Light Warlpiri and Warlpiri. She is especially interested in the roles of children and adults in contact-induced language change. She also documents traditional Warlpiri songs. Carmel has been involved with languages in remote Indigenous communities in Australia since 1996, in the areas of bilingual education and her current research.





**Professor Johanne Paradis**  
**University of Alberta**

Johanne Paradis is Professor in the Department of Linguistics and Adjunct Professor in the Department of Communication Sciences and Disorders at the University of Alberta. She studies bilingualism and second language acquisition in children with typical development and in children with developmental language disorders. Her primary research focus concerns children learning English as a second language from immigrant and refugee families: How these children approach native-speaker competence, what unique language development profiles they display, and the factors explaining why some individual children learn English faster than others. Johanne's research on bilingual children with developmental disorders includes investigating their linguistic profiles in development and determining what measures best differentiate bilingual children with typical development from those with language and communication disorders. One outcome of this research is a website with resources for the assessment of children in multilingual settings, CHESL Centre. Johanne is Director of the Language Acquisition Lab in the Linguistics Department and is the current Editor of the *Journal of Child Language*. Johanne's research has been supported by Alberta Innovates-Health Solutions (AIHS; formerly the Alberta Heritage Foundation for Medical Research), the Social Sciences and Humanities Research Council of Canada (SSHRC), the Canadian Language and Literacy Research Network (CLLRNet), and the Alberta Centre for Child, Family, and Community Research (ACCFRC).



**Professor Gillian Wigglesworth**  
**University of Melbourne**

Professor Gillian Wigglesworth is Chief Investigator on the ARC Centre of Excellence for the Dynamics of Language and director of the Melbourne node [www.dynamicsoflanguage.edu.au/](http://www.dynamicsoflanguage.edu.au/) and leader of the Learning Program in the CoE. With an extensive background in first and second language acquisition and bilingualism, her major research focus is on the languages Indigenous children living in remote communities are learning, and how these interact with English once they attend school. She is very widely published in international journals and books, and has edited or authored nine books including Ng, B.C. & Wigglesworth, G. 2007. *Bilingualism, an*



*advanced resource book*. London, Routledge, and Wigglesworth, G., Simpson, J. & J. Vaughan (Eds.) 2018. *From Home to School: Language Practices of Indigenous Children and Youth*, Palgrave Macmillan.

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