

An update from the Language Lab

Dear Families,

First of all, for those of you who we are yet to meet, we extend a welcome to the ANU Language Lab community! To everyone, a very warm thank you for your interest in our research. The Lab will be 12 months old in November and we would not have got off the ground as quickly and successfully as we have without your involvement and wonderful enthusiasm! More than 200 families have now added their names to our ongoing contact database.

This is the first of our newsletters we will send out progressively to keep you all up to date with the progress and findings of the studies we are conducting as they progress. 2015 has been a busy year so far – here is a look at what we have been up to!



The Canberra Longitudinal Child Language Project

The Language Lab's founding facilitated the launch of The Canberra Longitudinal Child Language Project – a study of children's typical language development in the ACT.

The CLCL Project is the largest study of its kind to be undertaken in the field in Australia. We will follow a cohort of around

100 children from 9 months old right through to 5 years of age, when they will be ready for school. We have almost recruited our entire sample, and have now had over 50 children attend their first few sessions!

Along the way we will be tracking the development of the children's language, as well as cognitive skills and environmental factors that may influence later linguistic abilities.

9-month-old EEG:

At the 9-month session for the CLCL Project, we have been using EEG (electroencephalography) to see whether infants can identify words in running speech. We play the children sentences like “*The sparrow is in the tree*”, and shortly after play either a word that was in the sentence (e.g., *sparrow*) or one that wasn’t (e.g., *eagle*). We then see if the children recognise the familiar word in comparison to the unfamiliar one by looking at their brain wave responses. Here’s a picture of little Daniel wearing one of our infant-sized EEG caps!



In later sessions during the project we will be using our eye-tracker, a special monitor with an in-built infra-red camera to detect children’s eye movements (see below). This

allows us to see where children are looking on a computer screen as they watch visual patterns or pictures while hearing language. Stay tuned for more updates!

Other Projects

For her PhD research **Sara Quinn** has conducted a longitudinal study of 54 children, beginning when they were around 18 months, and finishing when they were 2 years old. The study investigated the relationship between pretend play and language acquisition. Specifically, Sara



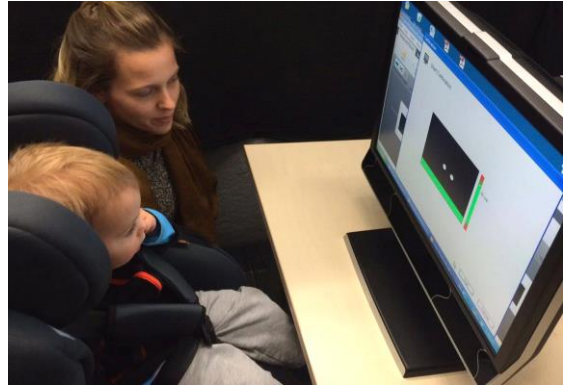
was interested in how parent-infant interactions differ between pretend play (e.g., a pretend tea party) and functional play (e.g., rule-based games such as puzzles), and how these differences are associated with infant language development.



Her results showed that pretend play provides a rich environment for infant learning: in comparison to functional play, pretend play is characterised by more complex language and conversation, greater shared attention, and more representational gestures (e.g., using a spoon as a microphone). Sara will submit her PhD in the next few months and will remain part of the Language Lab team in 2016.

For her honours thesis, **Annie Pate** investigated how 2.5-year-old children rapidly learn words. To do so, she showed children pictures of pairs of novel objects and paired them with novel names. The children saw these novel objects appear on the eye-tracker screen and were required to track the co-occurrence of the objects and names for about 3 minutes. After this,

their knowledge of these new words was tested. The results showed that even after only a short exposure period the children were able to recognise the new words and link them to the novel objects – pretty impressive stuff! Annie has just submitted her thesis and is considering undertaking study in Clinical Psychology in 2016.



For her undergraduate student project, **Shanthi Kumarage** investigated whether children can predict the upcoming content of a sentence from the meaning of the verb. In the study, 2.5-year-old children heard sentences like “*The boy eats the cake*” and “*The girl likes the ball*” as they viewed pictures on the eye-tracker. In the first sentence the verb ‘eat’ requires an edible object (i.e., the cake), whereas in the second sentence the verb is less restrictive.

Shanthi found that when children hear a verb like *eat* they look automatically to the semantically appropriate object (i.e., at the cake after hearing ‘eat’), rather than to other objects. This shows that young children are able to rapidly predict the upcoming content of language. This ability also appears to be related to their vocabulary size: the more words they know the better they are at predicting the end of the sentence. Shanthi is still finishing her undergraduate degree and is planning on beginning her honours year in the second half of 2016.

Meet the Language Lab Team



Dr Evan Kidd

Evan is an Associate Professor in the Research School of Psychology at The Australian National University, and is the Language Lab’s founder. He has been studying child language acquisition for 18 years in a number of different countries and cultural contexts, from “big city” contexts like Canberra to the wilds of Papua New Guinea.



Lauren Morrison

Lauren has been working as a Research Assistant to Dr Kidd on a variety of child language development studies for 2 years, and is the Research Officer currently managing the Canberra Longitudinal Child Language Project. She completed her Bachelor degree in Psychological Science at The University of Newcastle in 2012.



Tara Spokes

Tara submitted her PhD earlier this year, in which she investigated changes in brain activity associated with aging using EEG. She is a mum of two and is also currently working on two other dementia related projects at The ANU. Tara will continue working primarily on the EEG element of the Canberra Longitudinal Child Language Project next year.



Sara Quinn

Sara is completing her PhD research – a longitudinal study looking at the relationship between pretend play and language acquisition. She also has clinical psychology experience, and is a mum of two. We will be seeing much more of Sara next year once her thesis is submitted!



Seamus Donnelly

We are excited to be adding another valuable member to our team in 2016, with Seamus beginning a Post-doctoral position with us early next year. Seamus completed his PhD research at the Graduate Centre at the City University of New York, US, investigating the effects of bilingualism on cognition.

Many thanks once again for your involvement with the Language Lab. We look forward to meeting many more of you next year. Have a safe and happy holiday season!

In the meantime, you can keep up to date with the Lab's activities by liking our Facebook page!:

www.facebook.com/LangLabANU