The LENA Project:
How Young Children Learn to Talk

HELLO FROM THE HUNGRY MIND LAB

Before anything else, we want to thank you all for contributing to the LENA project! Without you and your families this project would not have been possible. Since November 2014, when we first started this research, we have collected a total of 5,405 hours of audio recordings from 123 families across South East London. We are now busy crunching the numbers and analysing the recordings to find out how children learn to talk.

This is our first newsletter, which we have put together for everybody who's helped us with the LENA project so far and who's wanted to know more about our work.

THE HIGHLIGHTS

- We've collected 5,405 hours of recordings from 123 families
- We've presented preliminary findings from the LENA project at two conferences
- Our preliminary data analyses show that children speak most when taking turns in a conversation
- We've started to expand the LENA project through new collaborations, for example one looks at how babies react to music

Meet the Team

Dr Sophie von Stumm is the director of the Hungry Mind Lab at Goldsmiths, University of London. She started the LENA project in summer 2014, supported by a small team of enthusiastic student helpers, who initially trialed LENA in five or six families. This pilot study showed that LENA was an extremely powerful tool to investigate children's language development. By June 2015, Dr von Stumm had secured funding from the Wellcome Trust to roll out the LENA project on a bigger scale, including hiring two research assistants and purchasing the study materials required to test at least 100 families. Dr von Stumm also works on several other projects that utilise digital technology to study behaviour, which are described on our lab website http://www.hungrymindlab.com/

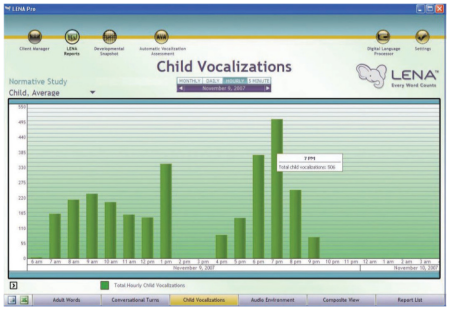
wellcome trust

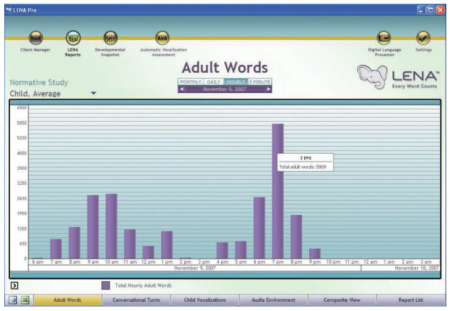
Karim Secker is a PhD student within the unit of school and family studies at Goldsmiths, University of London. Prior to starting his PhD, he supported children with learning difficulties. He joined the LENA project in November 2015, and provides invaluable support to database management and transcription analysis. His PhD focuses on the neuropsychology of empathy.

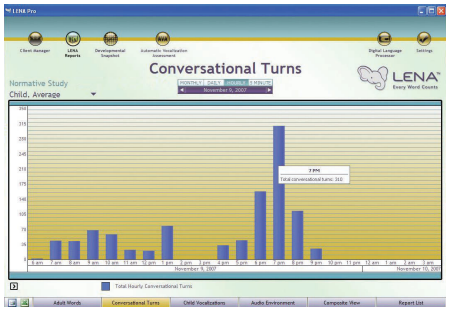
Katrina d'Apice is a PhD student at Goldsmiths, University of London. She joined the LENA project in February 2015, shortly after completing her Master's Degree in Cognitive Neuroscience and Neuropsychology at Birkbeck, University of London. Previously, she taught science in a variety of secondary schools in London, Brighton and Bolivia. Her PhD focuses on the association between language delay and attention.

Every Word Counts

The Digital Language Recorders that children wear inserted in their clothes chest pockets are only one part of the LENA package. The other is a computer software program that uses algorithms to analyse the information collected by the Digital Language Recorders. This software tells us how many words each child has spoken over the course of the recording, as well as how many words each child has heard from the adults around them. Below you can see examples of the software output. The first two images show the number of child words and the number of adult words over the course of a recording session of 16 hours. The third graph plots the number of conversational turns that occurred during the recording hours, which refers to those moments when the child responded to their parent's comment or the parent responded to their child's comment.







Taking the LENA Project on the Road

Katrina has presented our LENA project at two scientific meetings this year.

The first meeting was the British Society for the Psychology of Individual Differences (BSPID) in Nottingham, where Katrina presented a poster that reviewed the LENA project and its sample. Overall, 65 scientists from all around the UK attended this meeting, and many were fascinated by our LENA project. In fact, Katrina won the Poster Presentation Prize for her scientific poster!

The second meeting was the International Society for Intelligence Research (ISIR) in St Petersburg in Russia in July 2016. This conference was attended by more than 100 international scientists, who are interested in the study of cognitive development. Katrina gave a plenary talk about our LENA project, which was very well received and attracted a lot of interest in our work.

Data Exploration

We have observed an enormous range of word counts; children heard between 1,107 and 4,336 adult words over three days. Children spoke between 119 and 740 words over three days, this includes children aged 24 to 48 months. It seems that children speak most when they are engaged in conversations with adults. We are currently busy transcribing two 5 minute segments of conversation per child, for each day of recording. As you can imagine this will take some time, but we'll keep you posted on our progress.

Partner Surveys

Before you received the study materials, you all kindly completed an online survey. However we'd also like your partner to complete a survey, which includes questions about his/her language and reading habits.

Many partners have kindly completed their partner survey, but if you haven't yet done so, there's still time. Please click on the link below when you have 15 minutes to spare. We'll email you £10 worth of more2you e-codes that can be used for online shopping.

https://goldpsych.eu.qualtrics.com/SE/?SID=SV_5bf5NkgnOxxboQl

Thank You So Much for Taking Part in The LENA Project! We'll be in Touch Soon with Our Findings!

Wishing You All A Beautiful Summer!