Dear Learning to Talk Families and Friends,

Whether or not you and your child visit the **Learning to Talk Lab** at the **University of Minnesota** or the **Learning to Talk Lab** at the **University of Wisconsin-Madison** you may have noticed that the name of the study you are participating in is called "**Skills4Words."** This study is designed to help us find out more about the **skills** children need to learn sounds and words. We continue to find out new and exciting results as we enter the second year of the study and your children come back to us for their "Timepoint 2" visits. In this month's newsletter we would like to highlight one of the experimental tasks that most children participate in during the **recording room** portion of the visit: **Non-Word Repetition**. Many parents ask us about this interesting task as the children play the **silly word game**, and earn all those stickers! We are grateful to you and your child for helping us find out more about the amazing process of **learning to talk!**

Best regards,
Ben Munson, Principal Investigator

Learning to Talk Lab– UMN

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Special points of interest:

- *Find out about the Non-Word Repetition Task!*
- *L2T lab findings!*
- *See what's in store for our graduates!*

Inside this issue:

What is the **Non-Word Repetition Task**?

Ben Munson, PhD/ Principal Investigator/University of Minnesota/Learning to Talk Lab
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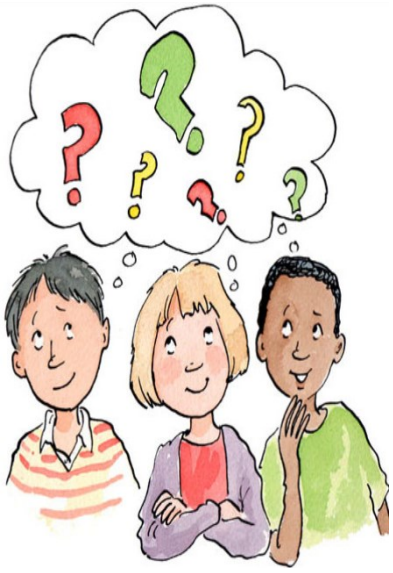
Children come to the world not knowing how to speak a language and in a few short years they learn how to make sounds, put them together into words they have never heard before, and talk to others! It seems as if children who are **school-ready** start school with the large vocabularies needed for success in reading and writing because as very young children they learn sounds, and words efficiently and quickly.

Think of the job in front of every young child! Every **thing** and every **name for that thing** is **new** to them. They are seeing and learning about their world for the first time, just like we might have to do if we traveled to a foreign country for the first time. How do children do this important task? During their day, children come across objects they have never seen before, and someone tells them the name of these new objects. Think of your child seeing a picture of something unfamiliar in a book. Parents usually point to the picture, say the **new** word for the child and the child repeats the **new** word. The child might **play** around with the word by saying it a number of times and may not get all the sounds right at first. But, after repeating it a number of times and hearing it again the next day during the same story, the child might say it right! *(next page…)*

"...we want to find out more about how young children [learn new words] so quickly and efficiently."

What is the **Non-Word Repetition Task**? (cont…)



At the Learning to Talk Lab we want to find out more about how young children do this so quickly and efficiently, but we needed to come up with a task that would help us create what children do out in the real world when they have to learn a new word **and** we needed to be able to record what they do so we could look for patterns. Our team came up with a way to create a **word-learning situation** in the lab called the **Non-Word Repetition Task.**

You may remember when your child came to the lab and sat in front of the computer and the microphone in the "sound treated" room. Your child heard a silly, made-up nonsense word like ***keeftane*** or ***boofkeet*** (what we call a "non-word"), saw a picture of an unfamiliar object at the same time, and was then asked to repeat the "silly word" **(non-word)** back. After the visit, we listened to the way your child said the **non-word** and compared it to how the computer presented it.

By listening to lots of children repeating these **non-words** (words which are **new** to them and they must say for the first time), we look for the sounds they successfully imitated and which ones they did not. We are wondering if we will see a pattern to help us understand the method children use to learn new words. The ability to learn new words is a big task that involves many steps: When children come across a new object, and hear its name for the first time, they must:

"They are seeing and learning about their world for the first time, just like we might have to do if we traveled to a foreign country for the first time. How do children do this important task?"

1. remember what they heard
2. hear all of the sounds accurately,
3. hold the sounds in short-term memory,
4. come up with a plan in their mind for saying the new word back, and then
5. say the new word.

This is a complicated skill! The **Non-Word Repetition Task** gives us a quick and efficient way to measure this word learning skill **and** we can do it right in the lab during the visit, because it simulates what children face out in the real world everyday when they have to learn new words.

Even more exciting for us is that our Non-Word Repetition breaks down this amazing new-word–learning task even further. The Non-Word Repetition Task is special because not only does it help us understand how children learn new words, it compares how children learn non-words that contain **sequences of sounds** that we hear often in real English words to how they learn non-words that contain sequences of sounds that we don't hear in English words very often. For example the sound sequence **FT** in our non-word **keeFTane**, is often heard in English words: a**FT**er, fi**FT**y**,** fi**FT**een, etc. When children repeat **keeftane**, they can use their knowledge of hearing, remembering, and saying the sequence of sounds **FT** from all of the times they have heard and said words in English that have the **FT** sequence,(like the word **after).** But our non-word **boofkeet** is a different story. The children must be able to take two sounds that they already know well, the **F** and the **K,** and put them together in ways that they haven't done very often before.

So here is where it gets exciting: we believe that the ability to repeat non-words with "strange" sound sequences, like **boofkeet** is a very accurate and reliable way to measure a children's growing knowledge of speech sounds and what they do to learn new words because it's harder to do. This is exciting because this skill has not been studied before with such young children. Your child is showing us how it's done!

These results just in from UW doctoral researcher, Michelle Erskine!

In a recent study, Michelle Erskine at UW-Madison used the ***Non-Word Repetition*** (NWR) task described above, to look at one of the ***Skills4Words*** we feel is important to increase vocabulary size: the ability to accurately repeat new, unfamiliar "non-words."

Michelle's study helps us understand what young children must do to learn new, unfamiliar words they encounter in the world everyday as young language learners!

"When children [can accurately repeat new, unfamiliar words], they are "school-ready" with the higher vocabularies they need for reading and writing success."

Learning to Talk seems to begin very early and depends on children accurately repeating back the new, unfamiliar words they hear in the world around them. When children have this skill, they are "school-ready" with the higher vocabularies they need for reading and writing success.

So, how did Michelle find this? She saw that in our previous studies, children from 3 to 7 years who were better at repeating sound sequences that don't occur very often in English (such as the "pw" in "pwabug" which we don't hear in any English words) know more words than children who have difficulty with this type of "sound" skill. The children who are good at repeating words with "odd" sound combinations seem to have the skill they need to learn and say sounds, and are the children who have higher vocabularies.

To look at how this same "sound learning" skill and vocabulary go together for children even younger than previously studied, Michelle compared how well our 2 ½ and 3-year-old children did on the NWR task and on a "standardized" vocabulary test, (a special kind of test that has been given to many children for many years and is a very accurate measure of how many words a child knows as compared to other children the same age).

Michelle saw the same result found in previous studies and was excited to confirm this finding now in younger children. Children who repeated sounds more accurately on the Non-Word Repetition task knew more words than children who weren't as good at repeating sounds. And further, Michelle determined that children who were particularly strong at learning sound sequences that don't occur very often in English (the "odder" nonsense words), had higher vocabularies than children who weren't as good at this task.

The children who were good at learning these "odd," nonsense words at a young age, were the children who knew the most "real" words. Michelle was able to say that young children who have strong "sound powers," (better understanding of sounds in words) have more words in their "school-ready" backpacks!

Feature on our Graduates

Julia Eckert

"I will be moving to Boston, MA for a while to work in nonprofits and find more adventures to go on."

Yakira Moore

"I will be staying in the Twin Cities pursuing future endeavors."

Sarah McGowan

"I will be attending the University of Minnesota, Duluth to pursue a master's degree in Communication Sciences and Disorders. I will also be researching cleft palate disorders and awareness to work towards my master's thesis."

Colette Felion

"I will be attending University of Wisconsin-River Falls where I will pursue a Master of Science degree in Communicative Disorders."

Annie Loof

"I will be attending the University of Wisconsin-Whitewater to complete my Master of Science Degree in Communication Sciences and Disorders."

Elizabeth Eitel

"I will be attending the University of Wisconsin-Madison to pursue a master's degree in Communication Sciences and Disorders."

Isla Katz

"I will be pursuing a Masters degree in Speech-Language Pathology at Miami University of Ohio where I will be also teaching American Sign Language."

Tyler Ellis

"I am fortunate to be moving to Iowa City to manage a research lab and assist in an investigation of cochlear implant users' perception of speech."

Kareem Darwiche

"I will be returning back to my hometown of Thousand Oaks, CA and am hoping to never see snow again."

Learning to Talk Lab

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Team Member of the Hour

Kerri Engel received a Bachelor's degree in business with Spanish and psychology minors in 2005 from the University of St. Thomas in St. Paul, MN. After a subsequent 6 years of living and working in business in New York City, she returned to the Twin Cities and enrolled as a non-degree seeking student at the University of Minnesota in the fall of 2012. Since then, she has been completing the undergraduate courses in Speech-Language-Hearing Sciences required for entrance into the Master of Arts program in Speech-Language Pathology. She was recently accepted into the University of Minnesota – Twin Cities Master's program in Speech-Language Pathology, which she will begin in the fall. Kerri has worked with children of all ages in a variety of settings and has loved her time working with the children participating in the Learning To Talk lab. As a speech-language pathologist, she plans on working with children in the birth to 3 setting and possibly in schools. Kerri is excited about getting married this summer and also enjoys playing with her dog, Hector, knitting, and strumming her ukulele.

We Want You!
Participate in the Twin Cities!

Interested in helping us improve methods for teaching young children? Join our research project! Our study looks at how young children learn sounds and words! Both you and your child can be involved!

Who can participate?

- Children who are 2-5 years old
- Children who are native English speakers
- Children who have normal hearing and are typically developing or have cochlear implants!

Families are paid for their participation and your child will receive a small toy and a book. Transportation (cab) will be provided if you would like it.

How do our studies work?

Sessions take place at the University of Minnesota's Shelvin Hall, 164 Pillsbury Drive, Minneapolis, MN.

Your child will participate in 1-3 sessions and the sessions last about 1-2 hours.

If you would like to learn more about our studies, please email us at learningtotalk@umn.edu, or call Maria Swora at 612-624-6893, or visit our website, www.learningtotalk.org and enter your information on our **Participate** page! We look forward to working with you!

Please pass this information on to family and friends who might be interested in this study. Thanks!