



LANGUAGE LINKS

Newsletter of Purdue University Child Language Research Projects



**PURDUE
UNIVERSITY**

Department of Speech, Language,
and Hearing Sciences

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SPRING 2024

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Child Phonology Lab
765-496-0345

Auditory Cognitive
Neuroscience Lab
765-494-4445

Attention + Neurodevelopmental
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Find our websites here:



Language Links is the Newsletter of the Child Language Research Projects in the Department of Speech, Language, and Hearing Sciences at Purdue University. Through this publication, we keep in touch with families who have participated in our research, as well as people who have referred families to our programs.

We are grateful for the contributions that you have made to our research, and we hope that you find the newsletter interesting and informative.

SPEECH SOUND DISORDER

In the Spotlight

It is fascinating how rapidly children learn to speak! Babies are born with the ability to cry and to vocalize but cannot yet produce vowels and consonants. However, by the age of 5 years, children typically produce all English consonants accurately in short words.

Nonetheless, a large percentage of children have difficulty producing speech as clearly as other children their age. An estimated 11-12% of 5-year-old children struggle to produce speech sounds accurately in the absence of a clear cause, such as hearing loss or neurological impairment. These children have a Speech Sound Disorder, or SSD. Children with SSD are also at risk for difficulties learning how to read and spell, especially if their speech difficulties persist past the age of 7 years. Although many children with SSD will improve their speech with therapy, approximately 3.5% of 8-year-old children have a persistent SSD.

Since the start of the COVID-19 pandemic, young children are being diagnosed with speech delays in greater numbers. Children who were born during the pandemic or who were toddlers at the beginning of the pandemic are more likely to have speech delays. We do not yet know how many of these children will continue to present with SSD, and how many will normalize their speech skills.

Researchers and clinicians in the SLHS Department continue to work to improve the identification, understanding, and intervention for children with SSD.

The Child Phonology Lab studies 4–6-year-old children with SSD. If you are concerned about your child's speech development, we can provide an initial evaluation and direction (see *Speech Learning Study*, p.3).

Contact a speech-language pathologist:

- Purdue's Speech & Language Clinic, 765-494-3789

Free public services are available at:

- First Steps of Indiana, 765-420-1404, for children under 3
- Greater Lafayette Area Special Services, 765-476-2900, for children 3 or older



Research Updates

Update from the Auditory Cognitive Neuroscience Lab Visual processing deficits in children with DLD

Children with developmental language disorder (DLD) have difficulty with comprehension and production of language that cannot be explained by injury, hearing loss, or neural deficit. One of the challenges these children face is understanding speech in noisy conditions. While many children and adults can use the speaker's mouth movements to help them understand speech, children with DLD do not benefit from seeing the talker's face to the same degree. But why? We tested whether children with DLD and their same-age peers with typical development show the same brain response to visual changes. Children watched a character change its shape from a square to a circle (or the reverse) and change its mouth movement from vertical to horizontal (or the reverse). The brain response to a movement change (but not to a shape change) was reduced and delayed in children with DLD. Additionally, when both features changed simultaneously, children with typical development showed an enhanced neural response compared to a single-feature change. This enhancement was not significant in children with DLD. These results suggest that children with DLD may not be as skilled at lip reading as their peers with typical development because they have deficits in encoding the visual information necessary for this skill.



8-12-year-old children with language difficulties are needed!

Does your child have a small vocabulary, make grammatical errors when speaking, avoid speaking, and/or have difficulty understanding and following directions? These may be signs of the developmental language disorder (DLD). We are looking for children to participate in 1-6 study sessions on Purdue campus. *As part of the study, parents will receive a free comprehensive evaluation of their child's language, hearing, vision, and non-verbal intelligence. Children are paid \$10/hour and parents are paid \$10/session.*

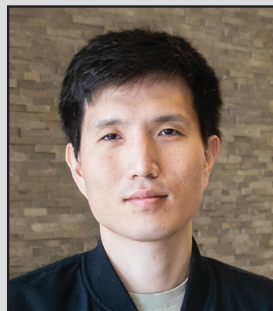
Contact Jennifer Schumaker
at jschumak@purdue.edu
or (765)494-4445 with questions.



Learn more about the study at
<https://hhs.purdue.edu/auditory-cognitive-neuroscience-lab/>
or scan the QR code.

MEET Dr. Kwang Kim!

I am a new assistant professor in SLHS. My laboratory (SKILLab) investigates how the brain plans and controls speech movements. My research topics include stuttering and speech development. I am excited to announce that my lab has several ongoing research projects that children aged 2 to 10 can participate in.



Contact:
skill@purdue.edu
765-496-0215

The Purdue LLAMA Lab is looking for families with children 22 to 28 months of age to take part in a study on how sensory experiences like smell and touch affect how children learn words. What's involved: A single, one hour visit to our child friendly research space at Purdue University, and completing online surveys. You will receive \$30 for visiting the lab plus \$10 for completing surveys online, and your child will receive a book.

See if your child is eligible by going to this link
<https://redcap.link/SenseToLearn> or by contacting the LLAMA lab at 765-496-0427 or llamalab@purdue.edu.
IRB-2022-1471, PI: Arielle Borovsky, 765-494-1689;
aborovsky@purdue.edu

Summer Programs for Kids

In the Summer of 2024, SLHS researchers and clinical staff will offer programs in which children participate in federally-funded research and receive therapy, continuing to build skills over the summer when school-based services are not available. *All activities are offered at no cost to families.* ****Call now to schedule eligibility testing!****



SuPur Friends Program

The Summer Purdue (SuPur) Friends Program is **for 9- to 12- year-old children with autism**. In SuPur Friends, children participate in pragmatic language groups, which are designed to provide opportunities to interact with peers, to learn and practice skills for social interaction, and to develop friendships. Two-hour sessions provide opportunities for participants to learn and practice skills during motivating activities. Parents have the opportunity to meet with clinical staff at the end of the program to discuss their child's progress. Compensation for participation includes a written report on results of standardized testing and \$10 per hour for eligibility testing and research participation. ***When and Where?*** The program will take place for three weeks in July, meeting in Lyles-Porter Hall on Purdue's campus from 9-11:30 each TWTh.

Contact: Dr. Brandon Keehn
765-496-0204 • bkeehn@purdue.edu

Kids Needed!

ATTENTION IN AUTISM

Ages: 8- to 13-year-old children with autism and typically developing children
Compensation: \$10 per hour for 2, two- to three-hour sessions
Location: AtteND Lab at Purdue (Lyles-Porter Hall)
Contact: Yesol Kim, 765.496.0205; kim3455@purdue.edu

SPEECH LEARNING STUDY

Ages: 4- and 5-year-olds with typical speech or with speech sound disorder
Compensation: \$10/session (2-3 one-hour sessions); children receive a toy per session. An assessment of your child's speech, language, and hearing is completed. Location: Child Phonology Lab at Purdue (Lyles-Porter Hall)
Contact: Françoise Brosseau-Lapré; 765.496.0345, childspeech@purdue.edu

Summer Fun program



During *Summer Fun*, children participate in fun and language-enriching preschool activities. Individualized communication goals are addressed daily during half-hour therapy sessions. Parents receive a written report of standardized test scores and meet with clinical staff to discuss their child's progress. Families receive \$15 per session for eligibility testing and research participation.

Who is eligible? 4 and 5 year old children with a significant delay in language development but without accompanying medical problems, hearing impairment or other significant developmental delays.

When and Where? The program meets TWTh mornings 8:45 - 11:30 June 11 - July 3 in Lyles-Porter Hall on Purdue's campus.

Contact: Dr. Pat Deevy
Phone: 765-496-1821
Email: deevy@purdue.edu





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