

## THE BUILDING BLOCKS OF LANGUAGE IN EARLY CHILDHOOD, PART 1: COMMUNICATION BETWEEN INFANTS AND PARENTS

by Joy Simpson

Baby's first word is a day as jubilant as the first time she walks. It is a momentous occasion in the life of a family.

What parents may not realize is the "important day" sticker should also mark an event that goes like this: Baby finishes her bottle, says "aah" and hands it to mommy. "Ahh" doesn't sound like a word, but baby has added a helpful gesture. She's communicating! Another feat between the ages of 8 and 12 months is: Baby looks at daddy and points at the passing kitty cat. Another: Baby looks at her favorite doll on the shelf, looks at mommy's face and back to the doll. These acts communicate baby's desires and interests, and for this reason,

they represent a critical stage in prelinguistic development.

Communication is a complex dance of thinking, moving, hearing, imitating, and eventually interacting. Infants use each of these functions. And they learn, in time, that it takes two to dance. The growing rapport between parent and child is critical in the early years, says Steven F. Warren, professor of [Applied Behavior Science] and director of the Schiefelbusch Institute for Life Span Studies at the University of Kansas. According to his research with Paul Yoder at Vanderbilt University, Warren says, "Once the baby is able to interact, mommy and baby will engage in give and take, sound and



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## THE FOURTH GRADE SLUMP: LATE EMERGING POOR READERS

by Kelsey Needham

Educators often report a "slump" around 4<sup>th</sup> grade in which some children who have had no difficulties learning to read in the early grades begin to experience problems. It is assumed that these problems arise from changes in the demands of reading in later elementary school grades. Whereas emphasis in the early grades is on learning to accurately recognize words, reading achievement by 4<sup>th</sup> grade turns more to comprehension. Reading difficulties can arise at this age from children's difficulties in comprehending language. BNCD researcher Hugh Catts and graduate student researcher Tiffany Hogan sought to deter-

mine the prevalence of later developing reading problems and the factors that are related to these problems.

The researchers gave 570 children a battery of reading and language tests in 2<sup>nd</sup> and 4<sup>th</sup> grades. Children were placed in 4 groups based on their reading comprehensibility. Groups included children who showed poor reading comprehension in 4<sup>th</sup> grade only ("late poor readers"), 2<sup>nd</sup> grade only ("early poor readers"), both grades ("persistent poor readers"), and neither grade ("good readers").

Five important determinants of reading

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## Upcoming Events for Parents and Kids

**Prairie Park Nature Center:** A series of nature programs is presented each week at the center, 2730 SW Harper Street in Lawrence. Saturdays, 10-10:30 a.m. & Sundays, 1:30-2:00 p.m. Call (785) 832-7980.

**KU Lied Center Family Series events:**  
**The Flying Karamazov Brothers**  
 Thursday, October 27, 2005 - 7:30 p.m.  
 Call (785) 864-2787.

**Unity Council of Topeka** presents its 6<sup>th</sup> Annual Celebration of Cultures Festival at Maner Conference Center on October 15 from 11 a.m. to 4 p.m. See [www.uctopeka.org](http://www.uctopeka.org)

**Changing of the Colors:** October 15 from 10:30 to 11:30 a.m. at George Owens Nature Park, 1601 S. Speck Road in Independence. Ever wonder why leaves change colors? Come to this fun-filled activity for children and families. Free. To register, call (816) 325-7115.

**Maple Leaf Festival:** During Baldwin City's 42<sup>nd</sup> annual festival, October 15-16, the Midland Railway will provide train rides each hour from 11 a.m. to 4 p.m. on Saturday & Sunday, through scenic farmland and woods aboard vintage railroad equipment. See [www.midland-ry.org/](http://www.midland-ry.org/)

**Haunted Forest:** 7 to 11 p.m. Oct. 22 and 29; 6 to 10 p.m. Oct. 30 at Cave Spring Historic Site and Nature Center, 8701 Gregory Blvd. in Kansas City. Imagine a haunted house set in a forest. Activities for kids of all ages. Call for fees. (816) 358-2283.

**Halloween Parade:** October 29<sup>th</sup> at 10 a.m., 415 S.E. Douglas St. in Lee's Summit. Children are invited to parade through the downtown in their Halloween costumes. Parade line-up starts at 9:30 a.m. Call (816) 246-6598.



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skill were tested by the researchers. *Word Recognition* refers to a child's ability to correctly read printed words. *Fluency* refers to speed and accuracy of word recognition. The number or range of words a child recognizes in spoken language is his *Vocabulary*. *Grammar* refers to a child's ability to understand sentences using the rules of language. *Text Comprehension* refers to a child's ability to understand a passage read to him or her.

The figures on the right show some of the differences in reading and language skills between the four categories of students in 2<sup>nd</sup> grade and in 4<sup>th</sup> grade. The zero line represents the mean or average performance of children. The figures show in which particular reading or language skills different groups of children performed better or worse than average.

Figure 1 displays the results of tests completed when students were in 2<sup>nd</sup> grade. It shows that late poor readers had good skills in word recognition and fluency and did not differ significantly from good readers. Early poor readers, on the other hand, had significant

problems in word recognition and fluency. Both late and early poor readers demonstrated mild deficits in vocabulary, grammar, and text comprehension abilities.

In 4<sup>th</sup> grade (Figure 2), late poor readers continued to show good word recognition and fluency skills. However, they had more problems with understanding text read to them (text comprehension). Compare on the two figures the difference between late poor readers and early poor readers in

text comprehension. By 4<sup>th</sup> grade, late poor readers are much more similar to persistent poor readers in this aspect of language.

The results of this BNCD study indicate that early poor readers appear to have particular problems with word recognition and fluency, especially in 2<sup>nd</sup> grade. Late poor readers do not show similar deficits in word recognition or fluency. Rather, their deficit is in text comprehension, which may be mild in 2<sup>nd</sup> grade, but becomes more apparent by 4<sup>th</sup> grade. Finally, other results showed that approximately 5% of children may show a 4<sup>th</sup> grade slump.

Learning which areas of reading or language are particularly difficult for different types of readers assists researchers, educators, and parents in developing more efficient and targeted ways to help children improve their reading skills. Children can benefit from earlier and more efficient interventions that are designed with such research results in mind.

*Hugh Catts is a professor and chair of the Speech-Language-Hearing Department at KU. Tiffany Hogan is a graduate student in the Speech-Language-Hearing Department. This research was presented at the annual conference of the Society for the Scientific Study of Reading in Chicago IL in 2002.*

Figure 1: Second Grade

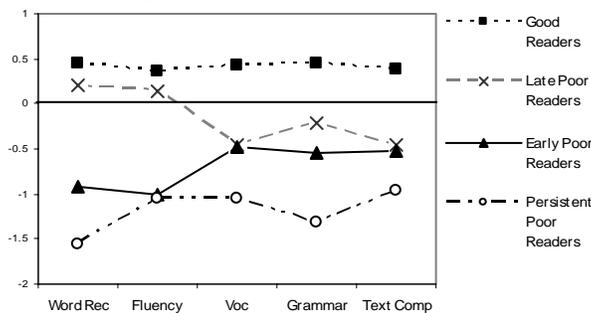
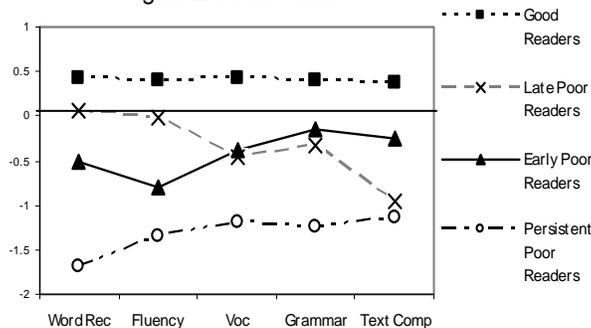


Figure 2: Fourth Grade



## BNCD INVESTIGATOR PROFILE: HOLLY STORKEL

To acquire the native language, a child must do two things: learn the words of the language and extract the relevant sounds of the language from those words. Holly Storkel, principal investigator of The Word and Sound Learning Lab at KU, has been investigating these two components of language learning since 2001.

Some lines of investigation concentrate exclusively on how the words of the language are acquired (lexical learning) whereas other lines of research examine how the sounds of the language emerge (phonological learning). The purpose of Holly's research is to examine the mutual influence of these two types of learning in typically developing preschool children, compared to their peers with language impairment. The ultimate intent of her research is to understand how typically developing children learn language and then apply this knowledge to clinical populations to examine the interaction between lexical and phonological

delays and to develop treatment and educational programs.

In addition to these important research efforts, the Word and Sound Learning Lab has provided free speech-language-hearing screenings to approximately 300 preschoolers from Douglas County and Kansas City. This free screening offered as part of the research program has helped to identify a number of children who had undiagnosed language delays. For children diagnosed with language delays, the research staff assists parents in locating diagnostic and treatment services in the community, providing a valuable service to families.



Holly Storkel,  
BNCD investigator

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gesture in a way that actually stimulates the child's development."

For families whose children have developmental disabilities, the steps of the dance aren't always clear, says Warren. [Children with autism] typically don't look their parents in the face -- a key signal for communication -- and so parents may not initiate conversation or know when their child wants something. Because a child with a developmental delay may not have full motor control, she may not make sounds that adults enjoy, recognize and reward.

Early childhood research tells us that a baby making frequent and increasingly complex sounds -- even if they're nonsense -- is developing a strong language



base that supports later success. Researchers can tell us a great deal about the building blocks of language in the first years of life. Parents should know this information because a significant delay in communication skills may be a signpost of disability.

*This is the first in a four-part series with Steven Warren and Nancy Brady, scientists at the BNCD. You can read the original article at <http://merrill.ku.edu/IntheKnow/sciencearticles/PMTintervention.html>. Look for Part II in the BNCD Winter newsletter!*

 **Help your child develop good language and communication skills with these tips!**

1. Talk to your child when you're playing together.
2. Have fun with nursery rhymes and songs, especially those with actions.
3. Encourage your child to listen to different sounds, such as cars and animals. This will help your child's listening skills.
4. Gain your child's attention when you want to talk.
5. Give choices to increase vocabulary, e.g. "Do you want juice or milk?"
6. Talk about things as they happen, e.g. when you're both unpacking the shopping.
7. Listen carefully and give your child time to finish talking. Take turns to speak.
8. Always respond in some way when your child says something.
9. Help your child to use more words by adding to what they've said, e.g. if they said "ball" you might say, "Yes, a red ball."
10. If your child says something incorrectly, say it back the right way, e.g. "Goggy bited it." "Yes, the dog bit it, didn't he?"
11. Try and have special time with your child each day to play with toys and picture books.
12. Limit TV time. Try to watch TV together so you can talk about the program and watch shows designed for your child's age.

From the leaflet *Talk to Your Baby*. **Talk To Your Baby** is a campaign by the National Literacy Trust to encourage parents and carers to communicate with their children from birth to three. For information visit [talktoyourbaby.org.uk](http://talktoyourbaby.org.uk).

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**Return Service Requested****About this Newsletter:**

The BNCD newsletter is designed to keep you informed about the ongoing research projects that are being conducted by BNCD researchers at the University of Kansas. Participants who have been part of recent research projects done by BNCD researchers, parents who have expressed interest in participating in future research, and individuals from organizations such as schools and day-care centers that have an interest in BNCD studies will receive this newsletter from time to time to keep them up-to-date about the research activities at the BNCD. If you do not wish to receive future newsletters, please call or e-mail the BNCD to have your name removed from our list. Research at the BNCD is supported in part by grant number 5 P30 DC05803 from the National Institutes of Health (NIH) at the University of Kansas.

## The American Library Association's 2005 Notable Children's Videos for children up to age 9

***Diary of a Worm*** by Weston Woods

- ◆ Ages 5-9. With the thankless job of helping the earth breathe, a young worm gives us a view of his daily life from the underground up.

***Duck for President*** by Weston Woods

- ◆ Ages 5-8. While campaigning for life, liberty, and the pursuit of happiness, Duck discovers it is very hard to run a farm, the state, and the country.

***Fireboat: The Heroic Adventures of the John J. Harvey*** by Spoken Arts

- ◆ Ages 5-8. The reactivation of an old fireboat on 9/11 is related in this iconographic adaptation of Maira Kalman's rendition of a true story.

***I Stink!*** by Weston Woods

- ◆ Ages 2-8. The roar of the garbage truck and Joel Goodman's jazzy music spring to life in this raucous animated version of Kate and Jim McMullan's stinky tale narrated by Andy Richter.

***This Is The House That Jack Built*** by Weston Woods

- ◆ Ages 3-7. Lively music and narration by Mandy Patinkin enhance this classic rhyme in a colorful animated film based on the book illustrated by Simms Taback.

***The Wheels on the Bus*** by Weston Woods

- ◆ Ages 2-6. The classic children's song takes a new turn on the way to the library in this version of Paul O. Zelinsky's adaptation.

For more information, visit the American Library Association's Webpage at <http://www.ala.org/>