

Current News:



Inside this Issue:

What is Infant-Directed Speech and Why Does It Matter?

Written by: Mariah Fowler

Research has consistently demonstrated that almost all adults, regardless of culture or language, modify their speech when speaking to infants.^{1,3} Infant-directed speech (IDS) is also known as “motherese”, “baby-talk”, and child-directed speech. As cute and funny as “baby-talk” can often be, many individuals are unaware of the important role this specified type of speech plays in a child’s development. Infant-directed speech has been a prominent research topic in the field of child development for decades.²

There are several characteristics that distinguish IDS from typical adult-directed speech. The most obvious characteristic of infant-directed speech is its *prosody*, or rhythm and stress patterns. Most adults use a musical “sing-song voice” when speaking to infants. IDS is also characterized by a higher pitch, more dramatic pitch range, a slower overall speech rate, frequent repetition, simpler utterances, and longer pauses between words.^{3,6} The exact functions of these speech variations are still being explored and debated among scientists, however, most can agree that there are at least three basic functions of infant-directed speech.

The three proposed functions of infant-directed speech include regulation of infant affect/emotion, direction of infant attention, and a means to aid and reinforce language development in the child.^{3,4,5} The specific functions of IDS are believed to change depending on the child’s age and developmental stage.^{4,5} Perhaps the most important function of infant-directed speech is the facilitation of language learning.

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Current Projects

1 visit:

10-month-olds

We use eye-tracking to determine where babies look on

the face when shown videos of adults speaking in infant-directed speech and making various facial expressions.



Infant Learning Project

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We are on the web:
bbs.utdallas.edu/ilp

**“Like” Infant Learning Project
on Facebook to receive weekly
information about infant
research, child development
and parenting!**

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action university.**

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Positive Impacts on School Readiness Through the Use of Montessori Methods

Written by: Ana Chavez

Although the Montessori Method of education has been implemented for more than 100 years and has shown positive impacts for its students, there is still much controversy amongst parents and educators about its significance in school-readiness.

Montessori programs were founded on the idea that every child is unique and thus learns in a different manner and at his or her own pace. The highly ordered setting in a typical Montessori program includes a single teacher or guide and students of various age groups (i.e. 3-9 years-of-age) independently working on specifically developed sets of activities and materials that aid the children in developing key skills. Skills include executive functioning (the ability to connect past experiences to present time in order to plan, manage, and execute tasks), practical life (i.e. hand-washing, cleaning up after one’s self), and traditional school-related skills such as reading, writing, math application, science, and geography. These activities and materials are developed to teach the student self-correction and the ability to focus on mastering one skill at a time. Many of the activities also require peer-led collaboration allowing for socialization amongst the different age groups.

Traditional programs (public, private, and charter schools) have been shown to positively impact students as well, but provide the student with less autonomy and freedom of choice in relation to the skills and activities the student wishes to work on since it is predominantly teacher-led rather than student-led. Additionally, traditional school teachers are pressed to prepare their students to pass standardized state exams. Subsequently, students are pressed to either keep pace or slow down to stay with their same-age classmates. Researchers Lillard and Else-Quest designed a study including 53 traditional students and 59 Montessori students to evaluate the differing academic and social impacts between the two education methods (“Evaluating Montessori Education”, 2006).

The students were tested at 5 and 12 years of age using the Woodcock-Johnson Test Battery (WJ III) for academic measures along with several developed social differentiation problem sets to study social and behavioral differences between the two cohorts.

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Dr. Kate Shepard earned her master's and doctoral degrees at UT Dallas and conducted research here at the Infant Learning Project. She now owns a private practice in which she provides speech-language services to children in the North Dallas Area.

For more information, visit:



Shadow Me
Speech Therapy at
shadowmespeechtherapy.com

Thank You!

We would like to thank the families who have participated in our studies.

Without you, our research would not be possible!

Did you come to the lab with your baby and view synchronous and non-synchronous videos of women speaking on the eye-tracker?

- ◆ **We are analyzing data and will have the results of that study soon!**
- ◆ **You can look for the results of '6-month-olds Eye-Tracking of Synchronous & Desynchronous Speech' in the next issue of our newsletter in the spring of 2015.**

The **quantity** of infant- and child-directed speech that a young child is exposed to in the first years of life has been shown to be highly predictive of child language development.⁵ Most importantly, the **quality** of parent-child verbal interaction has been shown to be extremely beneficial and important for a child's language development, much more so than any "baby improvement" or "baby learning" programs that have become popular in recent years.⁵

It is never too early to practice infant-directed speech with your child. Even newborns, only hours old, have been shown to prefer infant-directed speech over neutral adult-directed speech as well as their own mother's voices over an unfamiliar woman's voice.⁴ The benefits of infant-directed speech do not apply only to female speakers. Fathers and other male caregivers are equally important sources of early interaction for infants.

Opportunities for face-to-face interactions such as talking, singing, and reading aloud to your infant can all help his or her brain and language development. If you feel silly "conversing" with your baby at first, you can use routine daily activities as opportunities to practice your infant-directed speech. Changing diapers, feeding, bathing, and playing are all ideal situations for one-on-one parent-infant interaction, providing opportunities for you to talk *to* your child by narrating your activities together when your infant is very young and provide a natural transition for beginning to talk *with* your child as he or she develops.

References

1. Falk, D. (2004). Prelinguistic evolution in early hominins: Whence motherese? *Behavioral and Brain Sciences*, 27, 491-541.
2. Snow, C.E., & Ferguson, C.A. (1977). Talking to children: language input and acquisition. *Cambridge University Press*, Cambridge, UK.
3. Bryant, G.A., & Barrett, H.C. (2007). Recognizing intentions in infant-directed speech: Evidence for universals. *Psychological Science*, 18(8), 746-751.
4. Cooper, R.P., & Aslin, R.N. (1990). Preference for infant-directed speech in the first month after birth. *Child Development*, 61, 1584-1595.
5. Ratner, N.B. (2013). Why talk with children matters: clinical implications of infant- and child-directed speech research. *Semin Speech Lang*, 34, 203-214.
6. Shepard, K.G., Spence, M.J., & Sasson, N.J. (2012). Distinct facial characteristics differentiate communicative intent of infant-directed speech. *Infant and Child Development*, 21, 555-578.

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Results found that 5-year-old Montessori children scored significantly higher in the areas of letter-word identification, the ability to phonetically decode words, applied math skills, and executive functioning. The 5-year-old Montessori group was shown to use a higher level of reasoning to solve issues in the social problem sets through the use of abstract concepts such as justice and fairness. Use of abstract concepts requires the students to understand the perspectives of others. The Montessori group also scored significantly higher (80%) on a False Belief Task assignment than the traditional students (50%). Similar results were found for the 12-year-old cohort. Twelve-year-old Montessori children were found to write more creatively and use higher level sentence structures. They were also more positive in their responses to solving social dilemmas.

Although much research regarding the effectiveness of the Montessori Method still needs to be conducted, it is evident that significantly positive impacts are present. This may be due to the encouragement of self-esteem and self-correction within Montessori activities and autonomous classroom settings. Montessori classrooms depend on peer-led interactions since the number of teachers/guides are few; this could explain the positive results for social interactions and social problem solving assessment amongst the Montessori students. Furthermore, the multi-age classroom setting in Montessori programs simulate real world interactions and are an advantage that traditional programs may lack.

Parents that are interested in Montessori programs or in providing a similar environment at home do not need to undergo strenuous effort to provide their children with activities that encourage a love for learning. There are several do-it-yourself activities that are convenient, affordable, and, most importantly, developmentally enhancing for children of all ages. For more information and examples of activities, please visit the pages listed in the box to the right or our own compilation of activities on our lab's web page: <http://bbs.utdallas.edu/ilp/>

- ◆ Reference: Lillard, A., & Else-Quest, N. (2006). Evaluating Montessori Education. *Science*, 313(5795), 1893-1894.



2015 Spring Lecture Series: Ensuring Children's Success in School

- ◆ Talks will be held Friday mornings, from 9:30—10:30 am
- ◆ Location: School of Management, Room 2.115

January 23, 2015

Margaret Owen, PhD

"Supporting School Readiness by Building a Communication Foundation"

February 13, 2015

Anne Van Kleek, PhD

"Scholars in the Sandbox: Academic Talk with Preschoolers"

March 27, 2015

Karen Huxtable-Jester, PhD

"Mindsets and Motivation as the Keys to Academic Success"

April 17, 2015

Bill Barfoot, PhD

"Promoting Academic and Socioemotional Growth Among Exceptional Learners"

Montessori Activity Links

- ◆ http://www.montessori.org/sitefiles/montessori_101_nonprintable.pdf
- ◆ <http://danaspinkribbon.blogspot.com/2013/02/50-montessori-activities-for-2-year-olds.html>
- ◆ <http://kidshealth.org/parent/growth/>

Current Events at the Infant Learning Project

Lab Awards & Presentations

Two of the Infant Learning Project's Undergraduate Research Assistants, Priscilla Jacob and Sarah Rouhani, were awarded the prestigious Buhrmester Undergraduate Research Award this past summer for their contributions to our lab. Each student was awarded \$500 and the lab was also awarded funds on their behalf to aid in research.

Congratulations Sarah and Priscilla!

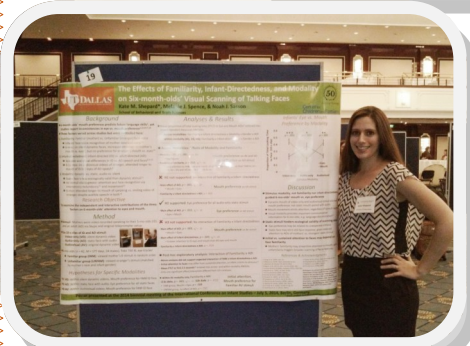
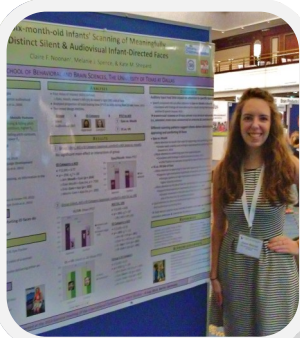


In honor of its 125th anniversary celebration, Converse College recognized Dr. Melanie Spence among 125 Outstanding Alumnae for high achievement and/or service in one or more of the College's Core Values: Excellence, Integrity, Exploration, Diversity, Respect, Community and Progress. **Congratulations Dr. Spence!**



This past summer, former lab students Claire Noonan and Dr. Kate Shepard presented research findings from their projects at the International Society on Infant Studies' Biennial Conference in Berlin, Germany!

Congratulations Claire and Kate!



Fall 2014 Infant Learning Project Team

We would like to welcome two **new students** to the Infant Learning Project team this semester. As always, we appreciate the contributions and enthusiasm of all of our excellent lab members!

Principal Investigator

Melanie Spence, PhD.

Graduate Research Assistants

Mariah Fowler, B.S.

Undergraduate Research Assistants

Sarah Rouhani

Priscilla Jacob

Ana Chavez

Samhita Swaminathan

Are you interested in further research participation ?



Who: Parents of 5 - 8 year old children

Where: The Family Research Lab

The Family Research Lab, headed by Dr. Jackie Nelson, studies emotional aspects of family relationships and children's development.

The lab is currently looking for parents of 5- to 8-year-old children to participate in an online study investigating daily experiences of family stress and parent-child conflict interactions.

Parents will receive gift cards as thanks for their participation.

Questions? Please contact the lab at familyresearchlab@gmail.com or (972)-883-4122, for more information.



Who: Families with children between the ages of 3 - 14 years old.

Where: The Think Lab

The Think Lab, headed by Dr. Candice Mills, studies how children and adults think about and learn from the world around them.

Current projects examine how preschool- and elementary school-aged children think about what others are likely to know, and how this influences their learning as well as how children determine whether to answer questions themselves or seek help from others.

For more information, please visit:

<http://www.utdallas.edu/research/thinklab/>

Questions? Please contact the lab at utdthinklab@yahoo.com or

(972) 883-6075, for more information.

Is there a research question we should address in our next newsletter?



We hope you find our newsletter helpful as you navigate your way through parenthood. If you would like our next newsletter to focus on a specific topic related to infant development, please let us know and we will look for relevant research findings related to the topic and may put it in our future newsletters!