



# AUTISM RESEARCH CONSORTIUM

## How to foster your child's language development

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Sciences*

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# Overview

- Starting at the very beginning – why even “babytalk” is more valuable than you think
- How important is parents’ speech to kids?
- Things that help *all* children (as far as we know)
- Things that “get in the way” of children’s language development – and how parents can work to maximize success
- How parental language leads to literacy and other good outcomes
- Controversies: media, e-toys and teaching tech

# A few words about what I study: child-directed speech (CDS), sometimes called “Babytalk”



## Linguist goes gaga over value of baby talk

Chicago Sun-Times

April 9, 1989 | [Randi Henderson](#) | Copyright

•Permalink

KENSINGTON, Md. Baby talkers, says Nan Bernstein Ratner, should not be ashamed of the goo-goo's and gaa-gaa's and all the other sounds that they make at babies that sound silly but feel right.



Nan Bernstein Ratner, a University of Maryland assistant professor who studies child language development, plays with her 10-month-old son, Adam.

By Randi Henderson  
Sun Staff Correspondent

### Maw-mee's widdle bay-beee

It sounds funny, but baby talk  
may teach language fundamentals

**B**aby talkers, says Nan Bernstein Ratner, should come out of the closet. Throw off your shackles, she tells them. Don't be ashamed of the goo-goo's and gaa-gaa's and all the other sounds you make at babies that sound silly but feel right.

Go ahead, have those little conversations with your baby, says the University of Maryland assistant professor of linguistics and speech pathology. Repeat words, elevate your pitch, speak in halts and exclamation points. You may not know it, but what you're doing is teaching your baby to talk.

As a student of baby talk — what she calls “a very respectable area of inquiry in the field of child language development” — Dr. Ratner, 35, finds her work little understood by the public. “The public either thinks these things are self-evident or they think it's ridiculous,” she explained from the floor of the living room of her Kensington home while her children, 10-month-old Adam and 3-year-old Jamie, provided constant distractions.

She finds herself battling, for example, no less an authority than *Miss Manners*, columnist Judith Martin, who had this to say about baby talk in her 1984 book, “*Miss Manners' Guide to Raising Perfect Children*”:

“Baby talk, as an affliction of practically everyone who comes into contact with a baby, even one that doesn't articulate at all yet, is as illogical as it is irresistible. . . . The household that gives in to it is doing the child a serious disservice. Eventually he will find out that words such as ‘oo’ are not on the college entrance examinations, and he will have to learn a second language. . . .”

Such an attitude couldn't be further from the truth, insists Dr. Ratner, who has been in the faculty at Maryland since 1983. For she believes



“Who’s  
mawmee’s  
pwitty  
widdle  
baaabyyy?”

You are!!!  
Yes, you  
are!!!”

“I’m supposed  
to learn from  
**THIS????**”



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"I do realise this probably indicates a certain lack of fundamental maturity but I actually prefer baby talk."

I am here to talk about  
why child-directed speech  
is very important:

Let's take things from the very beginning...

Did you know that you can teach your baby before she's born...?





# Infants' memory for their mothers' speech in the third trimester suggest that...

Chapter 5: Physical Development in Infancy



**She's learning quite a bit about language before she's born!**

DeCasper, A. J., & Fifer, W. P. (1980). Of human bonding: Newborns prefer their mothers' voices. *Science*, 280(6), 1174-1176.



# Some fast facts about “Babytalk” ...

- Also called infant- or child-directed speech...or “motherese” (fatherese/parentese)
- It’s found in virtually all societies around the world
- And has similar features
  - High pitch, exaggerated prosody (inflection), short, repetitive utterances, and a different set of vocabulary items...
- Exceptions are rare, but do exist (e.g., Mayans in Central America, Kaluli in Papua New Guinea)
  - In these societies, children actually do learn to talk at a slower pace
  - Learning from siblings or “overheard” speech is not as effective

# “Babytalk”: good or bad? Some facts

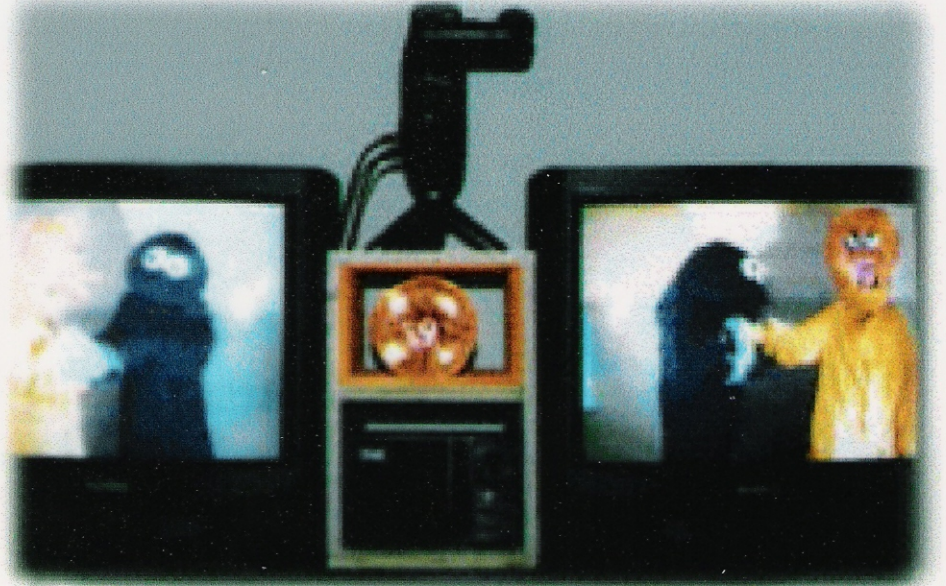
- Infants prefer babytalk and learn better from it than adult-adult “style” speech in laboratory experiments
- It’s so clear and well-structured that “even” computers can learn from it, but not from adult-adult speech
- A universal finding: The more infants are talked to, the better their language skills are

# How early can we tell if a child is “on track” to process this early language?

- As work done in HESP shows (Newman) ... long before before they can talk.
  - By 7 months, they know their name
  - By 8 months, they can recognize individual words from conversation



- While only saying 1 word at a time, they can understand, “Cookie Monster pushes Big Bird” vs. “Big Bird pushes Cookie Monster”...  
– SYNTAX



# But not every child seems to do it as early as others

- So, we have been tracking 125 families from 7 months to 24 months and beyond
  - Research sponsored by NSF
- Our work (Ratner, Newman) shows that some infant language abilities at 7-8 months of age predicts language skills in KINDERGARTEN.
- We've also uncovered new findings about CDS and language development



# We've both confirmed and extended work on the value of CDS

- We have extended the literature showing how important parents' speech to infants, toddlers and children is
- YOU are your child's most important language learning resource!



Free  
Baby Talk Classes



# The role of input in child language development

Including some recent work done here at Maryland...

# An overview of how we study input and interaction

- We bring parents (typically mothers) in to play with their infants/toddlers multiple times from 7 months to 24 months
- We transcribe what they say, and use computer programs to analyze patterns
- In this study, we have one of the largest samples of “motherese” ever compiled: over 1250 sessions, almost ½ million child-addressed words, 125,000 utterances...

# What we are finding:

- Input matters, particularly a wide variety of vocabulary, repeated often, at young ages (7 months)
- Other parent behaviors that boost later toddler language skills:
  - Imitating what the child says
  - Expanding or recasting what the child says
  - Using a slower (but natural) rate of speech
- All of these had very high correlations with the child's language scores at 24 months

# Let's take these one at a time in more detail...

Quantity of input really matters, even  
WAY before a child can actually talk  
(this includes even children with  
developmental problems):



- Treating the child as communicative even when they just look or vocalize
  - Reception leads production
  - Bathe a child in language from Day 1; as far as we know, there is no “end point” to this benefit



# “Flooding” the child with input

- Is actually a therapy component for some children/families
- Hanen Training
- Focused stimulation
- Does it work?



– Actually, it does. Encouraging parents to talk more *with* (not *around*, or *AT*) a delayed child does produce language growth, compared to “control” families

# But quality matters too:

- Things that make input work better for children:
  - “Contingency” – following, not leading the child’s attention
  - REPETITION – saying things much more than once
  - “Recasting” – rephrasing and enlarging kids’ attempts



# What does recasting or expansion look like?

- CHI: Blocks!
- MOT: Blocks. Yes, they have blocks here.
- MOT: Do you want to play with the blocks?
- MOT: We can pile them up. We can build with the blocks...
- CHI: Build blocks.
- MOT: Let's build with them. Let's build with the blocks.

# But some things can make CDS less effective:

- When the child doesn't initiate (or respond) in a typical way
- How to deal with this?
  - **Communicative temptations:** making it necessary for the child to request help, and shaping early attempts (a look at you) into progressively more advanced efforts (sounds, word attempts, signs)
  - A large component of Prelinguistic Milieu Teaching (PMT) for young children with ASD



# Creating a need to communicate: Combining talk with incentives



Find the stick in the bubble bottle.  
Where is it?" "Euw! Sticky!" "There it is."  
Get ready to blow!  
"Ready?" "Blow!"  
See bubbles everywhere, floating and popping.  
"Up, up." "Pop, pop, pop!" "All gone."  
Feel wet circles everywhere.  
"Oh it got the table wet! Wet table. It's wet everywhere!"



# What else can make CDS less effective?

- When children don't seem to understand language, parents tend to “order” rather than use typical input
  - E.g., “Sit down” rather than “it's time to eat” – this actually has been shown to depress language development, but is a natural response to a child who has communication problems.
  - So, it's normal, but parents can try to respond differently.



# What else can go wrong?

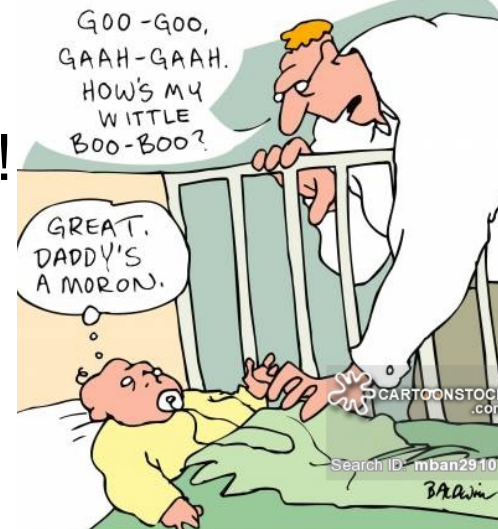
- People actually talk more with kids who talk more –
  - The “rich get richer and the poor get poorer” or “Catch-22” problem (for you old folks in the audience)



- How do we respond?
  - Thinking about speech to kids as a form of investment – early deposits will produce yields later...

# Some things parents do seem very strange!

- Is there any point to:
  - Speaking to a child using “babytalk” register?
  - Asking AND then ANSWERING lots of questions?
    - “Is that yummy? Yes, it is!!!”



Baby's first thought

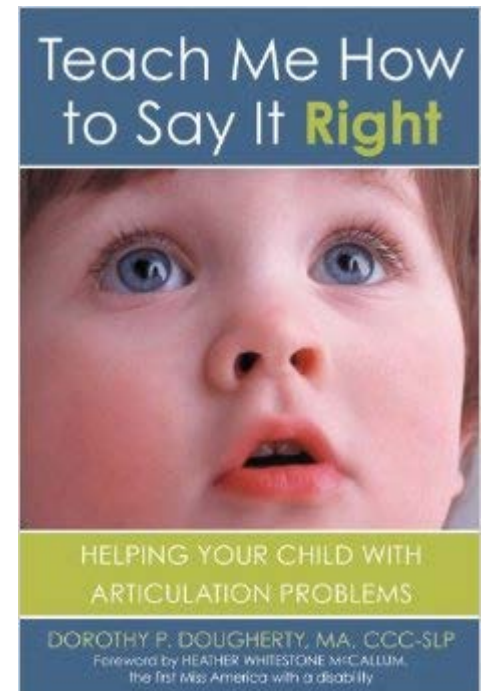
# Are some words more useful than others?

- Parents and teachers can get very “noun-y” when trying to help children learn first words
- But many children actually prefer other words!
  - E.g., NO! is a very good word!
  - As are activities that children like, or ways to communicate frustration...



# Should I correct my child's pronunciation or language?

- The evidence doesn't suggest that this helps most children at all
- And it could be very frustrating to the child
- Try to prioritize the message over the form





# “Motherese” and “Fatherese” ...

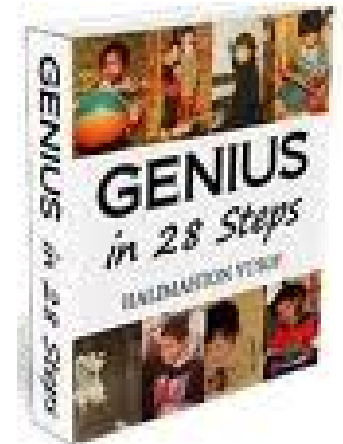
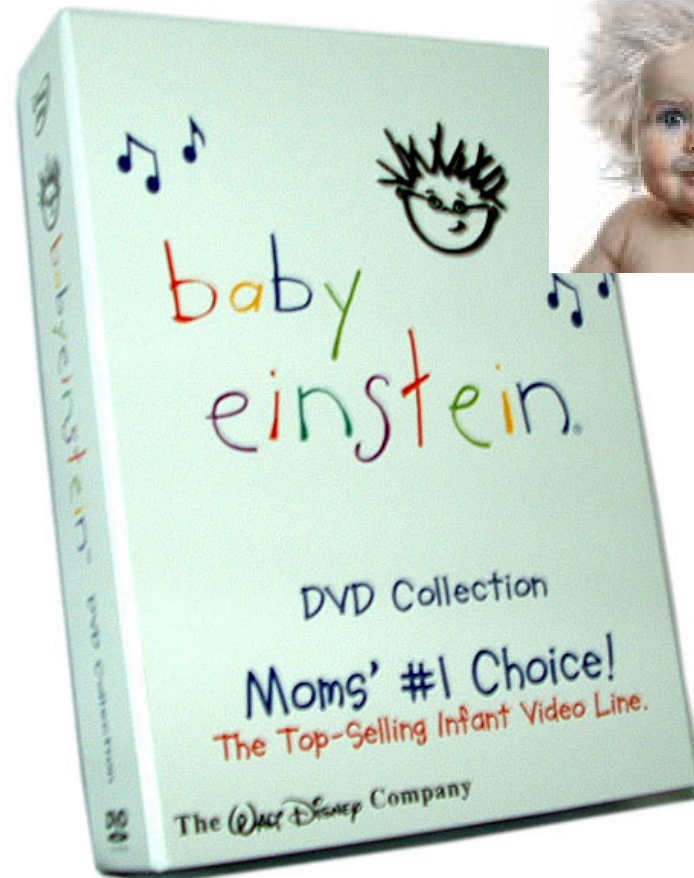
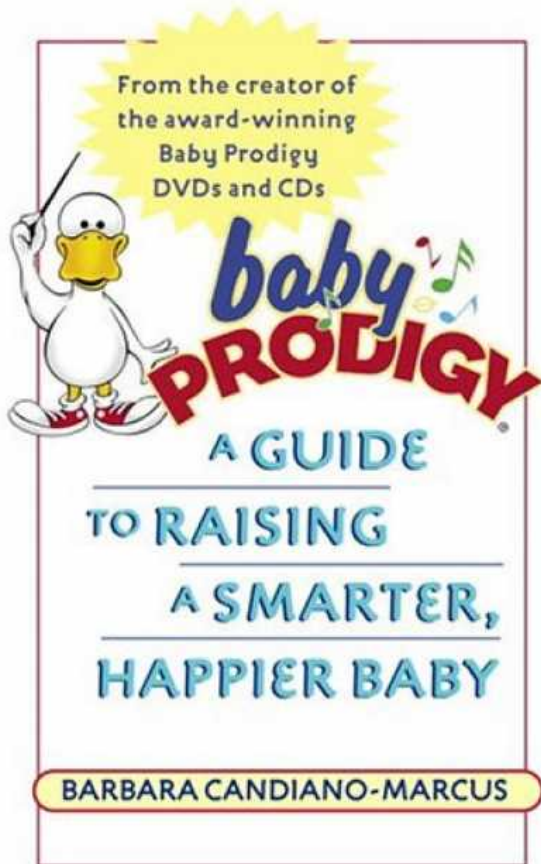
- Are different, and this is OK.
  - Moms tend to make things easier for kids...
  - Dads tend to create a “bridge” to adult language.
- “Compass” or “watch”?
- Barbie or “baby”?





“Hot topics” in CDS

# How effective are baby “teaching tools”?



# The reality:

No Einstein in Your Crib? Get a Refund - NYTimes.com - Windows Internet Explorer

http://www.nytimes.com/2009/10/24/education/24baby.html?\_r=1&pagewanted=print

baby einstein disney

File Edit View Favorites Tools Help

UM Tes... Blackb... PHR Sy... CNN CNN.c... No ... Travel... Select ... Select ...

The New York Times

FANTASTIC MR. FOX NOW PLAYING WATCH TRAILER

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October 24, 2009

## No Einstein in Your Crib? Get a Refund

By [TAMAR LEWIN](#)

Parent alert: the [Walt Disney Company](#) is now offering refunds for all those “[Baby Einstein](#)” videos that did not make children into geniuses.

They may have been a great electronic baby sitter, but the unusual refunds appear to be a tacit admission that they did not increase infant intellect.

“We see it as an acknowledgment by the leading baby video company that baby videos are not educational, and we hope other baby media companies will follow suit by offering refunds,” said Susan Linn, director of [Campaign for a Commercial-Free Childhood](#), which has been pushing the issue for years.

Baby Einstein, founded in 1997, was one of the earliest players in what became a huge electronic media market for babies and toddlers. Acquired by Disney in 2001, the company expanded to a full line of books, toys, flashcards and apparel, along with DVDs including “Baby Mozart,” “Baby [Shakespeare](#)” and “Baby [Galileo](#).”

The videos — simple productions featuring music, puppets, bright colors, and not many words — became a staple of baby life: According to a 2003 study, a third of all American babies from 6 months to 2 years old had at least one “Baby Einstein” video.

Despite their ubiquity, and the fact that many babies are transfixed by the videos, the [American Academy of Pediatrics](#) recommends no

Internet 100%

# Why don't they work?

- Research has long shown that it is the **INTERACTION** between babies and other people, particularly verbal interaction, that advances language and other skills.
  - In particular, infants gain from joint attention – when someone sees what interests them, and follows up on it. Thus,
- You will get more durable results by reading or playing with your baby using the **same toys and books** you had as a child (or a cardboard box, or sand, or bath toys, etc.)





Will using signs or a communication board depress my child's spoken language?





A.

Yes!

B.

No!

C. Slightly, but it's worth it

D.

I have no idea 😞





# We actually do know the answer to this

- NO. In fact, just the opposite:
- Having more success with communication actually tends to foster spoken language (if the child has the capacity)
  - We've been able to document this for years, with children who are learning sign, and now, with more modern "tech"
- Even speech-generating devices don't stifle speech development.

# So, should I teach my child “signs”?

- Signs are not easier to “learn”, but they are easier to “teach” and then reinforce
- For neurotypical kids, hands mature before the vocal tract, and so kids can use signs slightly before “words” – but there is no lasting benefit
- For kids with production limitations, signs (or even PECS cards) can be a useful transition to spoken language

# If your child is given a “communication system”

- Its benefits are maximized if it is used around the house –
- It’s not a therapy that should stay in the school room
- And it’s a therapy that should adjust as the child gets better at using it
  - Going from simple to more complex

<p>I want</p> 	<p>book</p> 	<p>help</p> 
<p>eat</p> 	<p>sleep</p> 	
<p>OK</p> 	<p>more</p> 	<p>si</p> 
	<p>nein</p> 	

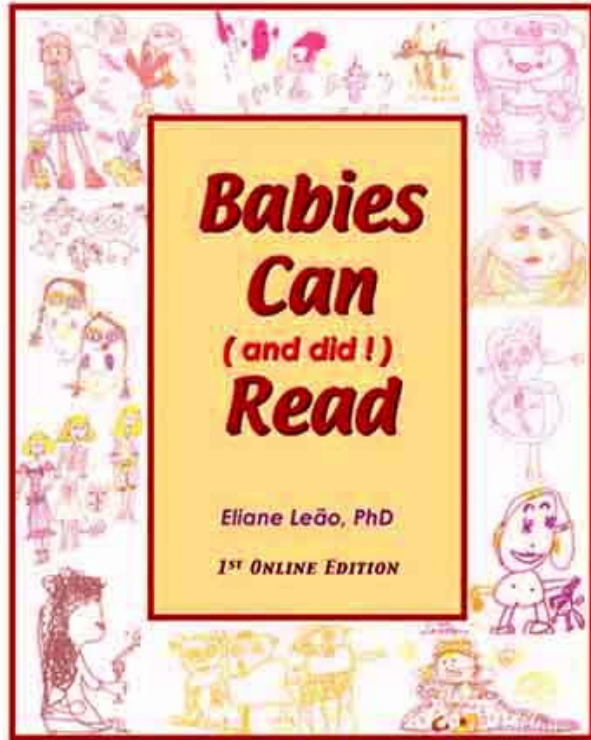
12 PICTURE BOARD BY VISION  
COMMUNICATION & TRUST FOUNDATION

● I AM				● I WANT																																																		
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hungry/thirsty 	cold/hot 	tired 	dirty 	tv/video/ovd 	call light /remote 	it quiet 	lights off/on 	to go home 																																														
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Our family is bilingual (e.g., Spanish/English) – what language(s) should we use?



# Can you teach a baby to read?



# It depends on how you define “reading”

- Even dogs, birds and sea lions can “read” words on flash cards.
  - This is not the reading that fosters and extends learning.





# Things that actually help children learn about reading and how to read

Books books and more books!

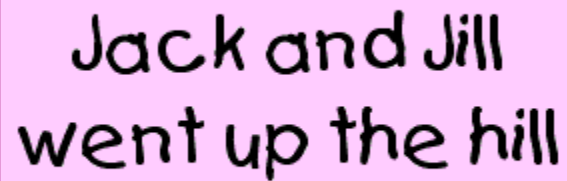


## I Can Read!

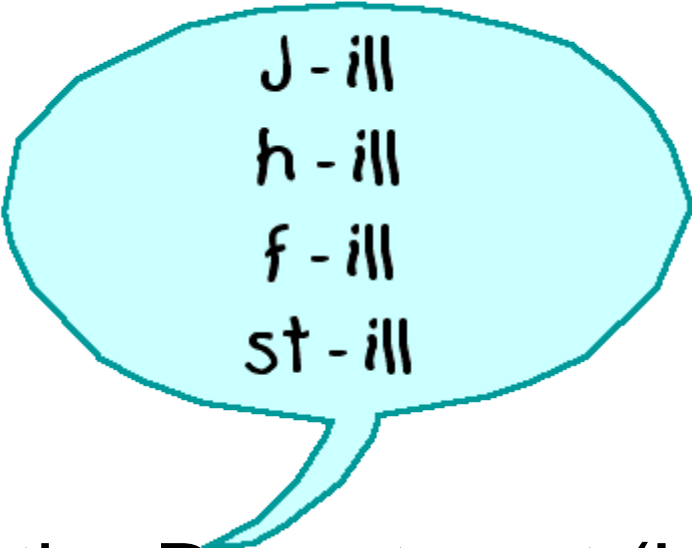
An Environmental Print Book



by Jennifer © [Reading Keys In Kindergarten](#)  
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Jack and Jill  
went up the hill



J - ill  
h - ill  
f - ill  
st - ill

- As work done in the Department (Huang, Worthington) and elsewhere shows, true reading requires:
  - Awareness of sound-letter correspondence not normally seen under age 4
  - Some knowledge of the grammar of the language and its vocabulary in order to get real comprehension of written material

# TV/computers: friend or foe?



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"He took his first step!"

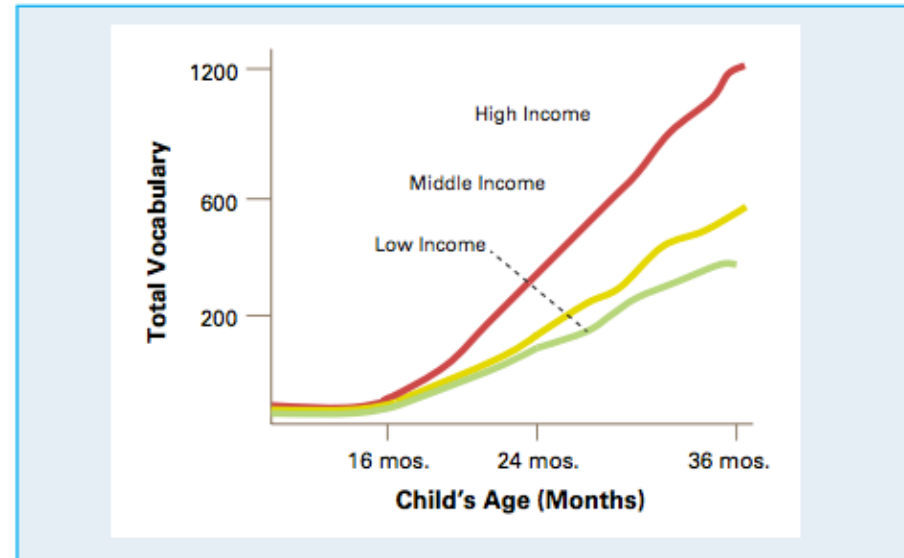
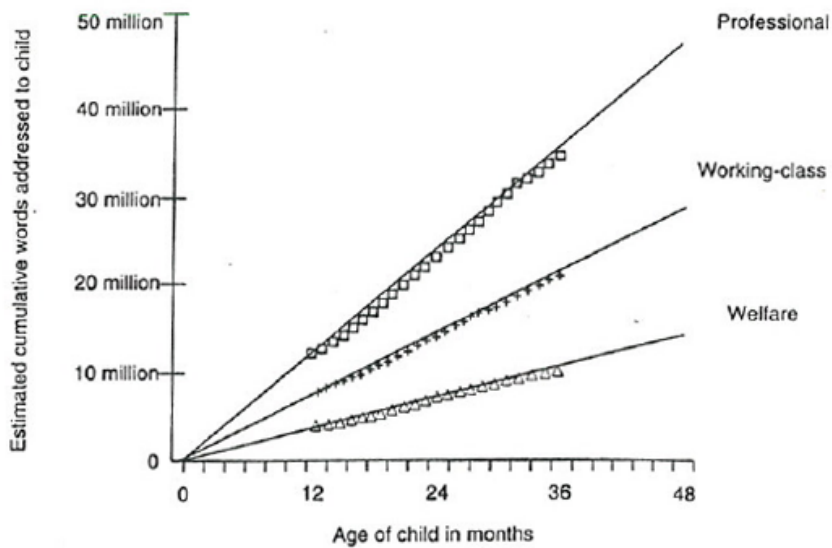
# Moral:

- It's not the technology: it's what you **do** with it
  - It's OK to read with your kid over a tablet
  - It's OK to talk about Sesame Street or Dora while you watch together



# Public concerns: The “Word Gap” (Hart & Risley)

The Number of Words Addressed to Children Differs Across Income Groups





# Efforts to cure a “Poverty of Words”

JUL  
17  
2014

MOBILITY

## How Providence Helps Kids Speak and Learn

The Providence Talks program uses digital recorders to count the number of words children are exposed to at home.

by [Melissa Delaney](#)

Melissa Delaney is a freelance journalist who specializes in business technology. She is a frequent contributor to the CDW family of technology magazines.

Providence, R.I., Mayor Angel Taveras has turned to mobile technology to get young children ready for school. Instead of tablets, however, his program is using word pedometers. Because research shows a strong correlation between the number of words kids are exposed to in the home and their academic success, Taveras’ office in February launched the Providence Talks program, which records families for a day at a time, then shows them how many words each person in the home speaks.

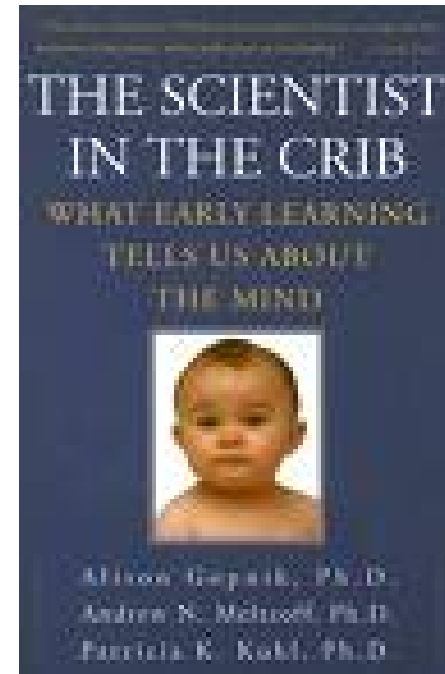
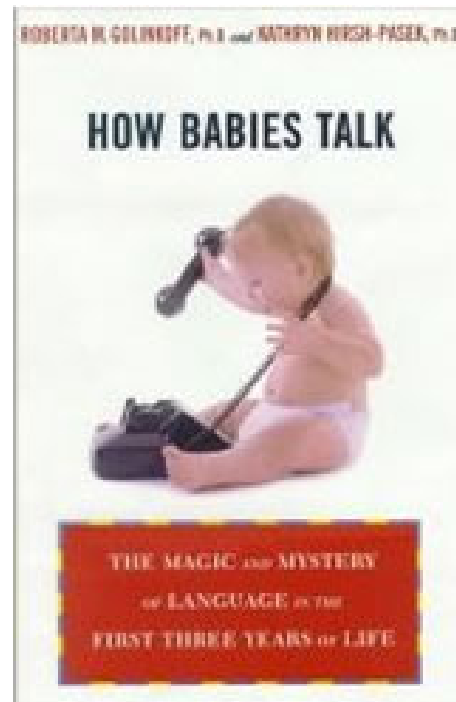
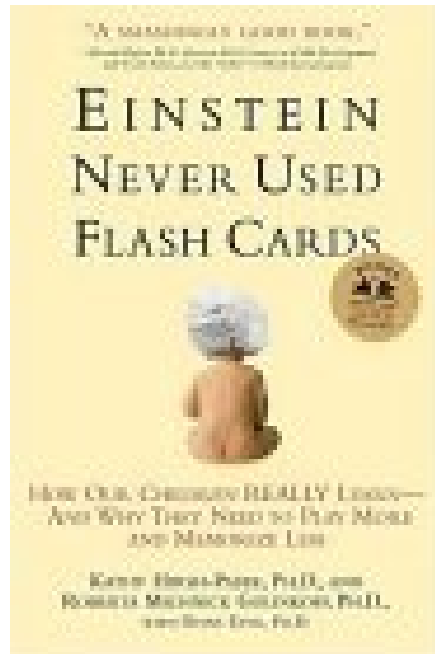
The program, which won the \$5 million grand prize from the 2012 Bloomberg Philanthropies Mayors Challenge, also gives participants ideas and resources for increasing conversation in the home.

We are exploring similar possibilities in local Title 1 schools/communities

Thirty Million Words™ Initiative





# Some ideas for enjoyable reading on these topics:





# Visit us at <http://childstudies.umd.edu>

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#### INFANT AND CHILD STUDIES AT THE UNIVERSITY OF MARYLAND

The Infant and Child Studies Consortium is led by child development researchers at the University of Maryland. We work to answer questions about how children think, learn, hear, and speak. Our research is made possible by the generous participation of local families.

Windows taskbar: 10:01 PM 5/13/2015

# Some additional reading/references

- We can get you copies of these materials if you'd like to read them:
- Bernstein Ratner, N. (2013). Why talk with children matters. *Seminars in Speech and Language, 34, 4, 131-142.*
- Barker, R. M., Akaba, S., Brady, N. C., & Thiemann-Bourque, K. (2013). Support for AAC use in preschool, and growth in language skills, for young children with developmental disabilities. *Augmentative and Alternative Communication, 29(4), 334-346.*
- Cable, A. L., & Domsch, C. (2011). Systematic review of the literature on the treatment of children with late language emergence. *International Journal Of Language & Communication Disorders, 46(2), 138-154*

- Lederer, S. H. (2014). Integrating Best Practices in Language Intervention and Curriculum Design to Facilitate First Words. *Young Exceptional Children*, 17(2), 32-43.



# Questions?

For more information, or references, write me at:

[nratner@umd.edu](mailto:nratner@umd.edu)

Thanks!!!