

# Bimodal bilingual videobooks: Shared reading activities for deaf children and hearing adults



**9 March 2025**

**EHDI Annual Conference, Pittsburgh**



Gene Mirus

Prof. of Deaf Studies

Gallaudet University

and

Donna Jo Napoli

Prof. of Linguistics and Social Justice

Swarthmore College

co-directors of RISE

<https://riseebooks.wixsite.com/access>

# WHERE WE ARE HEADED TODAY

The problem we are addressing:

Literacy skills among deaf children are  
in need of improvement.

A factor to contribute to resolution:

Shared reading activities using  
bimodal-bilingual videobooks

In order to understand how bimodal-bilingual books can help, we must first understand why deaf children are not succeeding.

# 10 essential elements for helping children acquire literacy

1. Build disciplinary and world knowledge.
2. Provide exposure to a volume and range of texts.
3. Provide motivating texts and contexts for reading.
4. Teach strategies for comprehending.
5. Teach text structures.
6. Engage students in discussion of stories.
7. Build vocabulary and language knowledge.
8. Integrate reading and writing.
9. Observe and assess.
10. Differentiate instruction

# Sources of difficulty for the deaf child

- Texts are written in the spoken language, which is an L2 (contrast to immigrant children)
- Writing systems can be shallow/transparent to deep/opaque. But for the deaf child, all are opaque

# The two worst problems

number one

lack of or weak first language

Lederberg, Amy R., Brenda Schick, and Patricia E. Spencer. 2013.  
Language and literacy development of deaf and hard-of-hearing children:  
Successes and challenges. *Developmental Psychology* 49(1): 15-30.

# What We Need Language For:

## Obvious uses of in daily communication

- Expressing our ideas
  - Developing an identity
  - Understanding others' ideas; access to information
- Making friends, telling and catching jokes

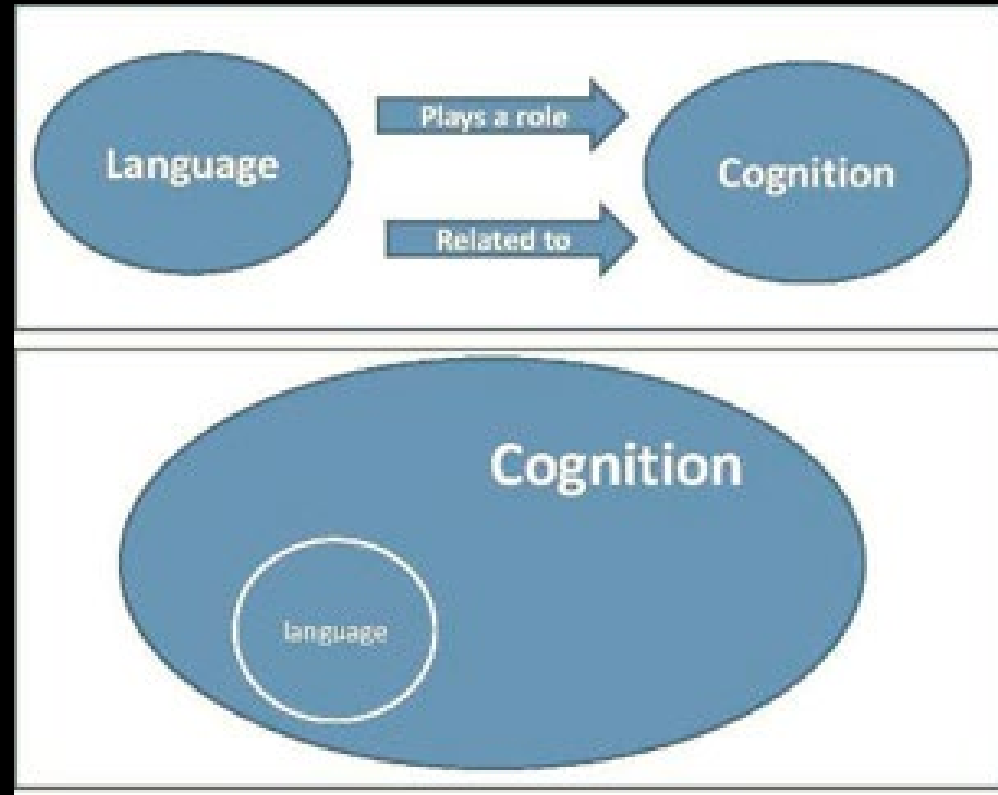




## Less Obvious –

Engaging in cognitive activities that require a solid first language base

- Literacy
- Organization of memory (Ronnberg 2003; Pisoni and Cleary 2004; Burkholder and Pisoni 2006)
- Number manipulation (Gregory 1998; Kelly and Gaustad 2006; Blatto-Vallee et al. 2007; Convertino et al. 2009)
- Novel problem solving (Kronenberger et al. 2014)
- Theory of Mind (Courtin 2000; Meristo et al. 2007)



# **Cognitive faculty with two modalities: aural oral & visual manual(gestural)**

Both entirely capable of expressing everything language needs to express, both handled by the language mechanism in the brain.

- **aphasia evidence** (Corina 1998 and later)
- **first language acquisition evidence** (Meier & Newport 1990 and later)
- **language processing evidence** (Emmorey 2001 and later)
- **neurolinguistics** (Neville 1990 among many)
- **second language learning** (Newport 1990)

# Brain Plasticity

The brain changes over our lives; some plasticity is lost. This affects various cognitive abilities.

With respect to language:

- First language acquisition critical period is early, maybe 3 to 5 years old (some say younger)
- Speech acquisition critical period may be as early as 18 months

**Conclusion: the window of opportunity for acquiring a first language is small.**

# Prejudicial Behavior

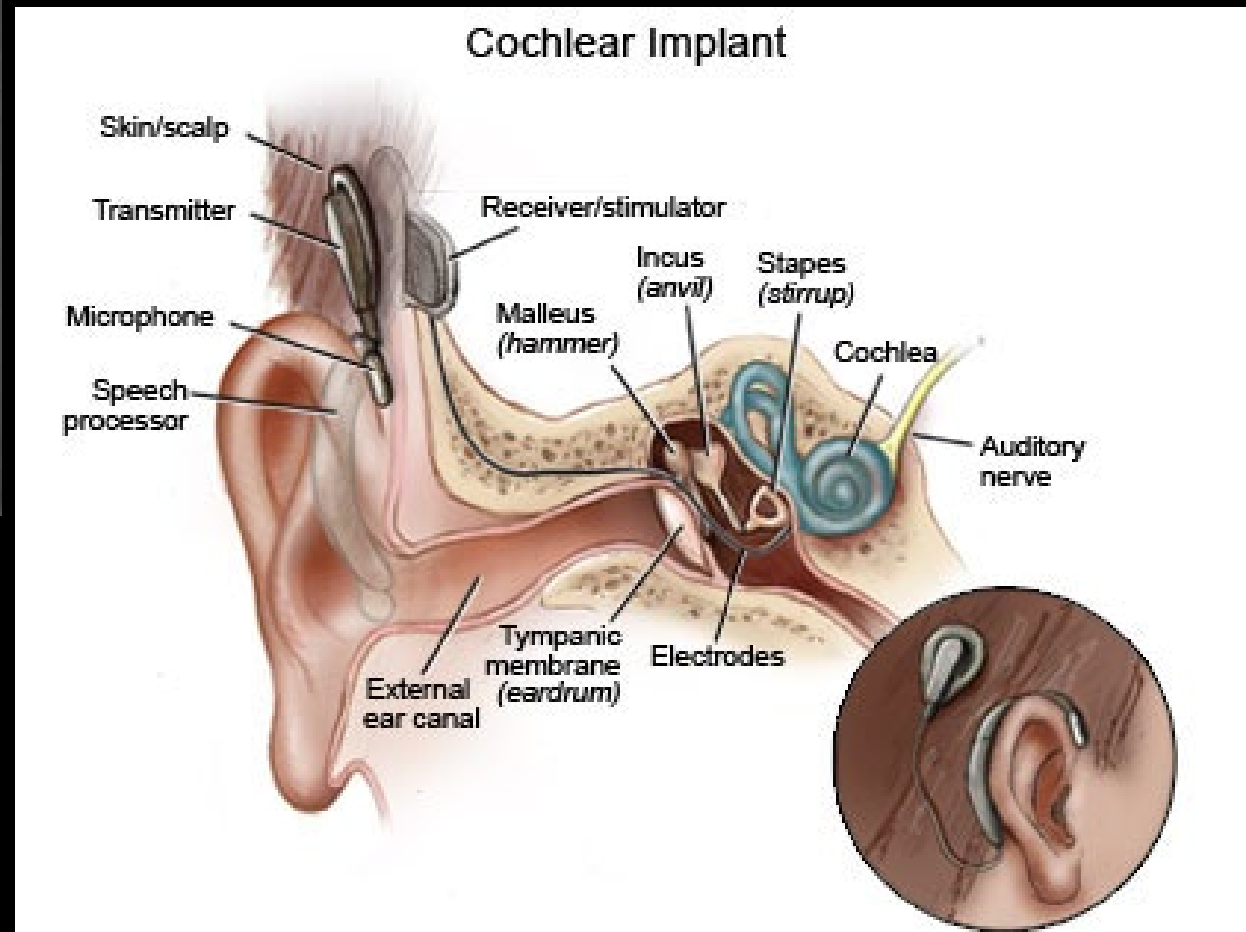
## Reactions at birth

Doctor says,  
“I’m sorry....”  
“diagnosis”  
“treatment”, “cure”  
“The choice is yours” –  
but really they are predisposing you toward oral

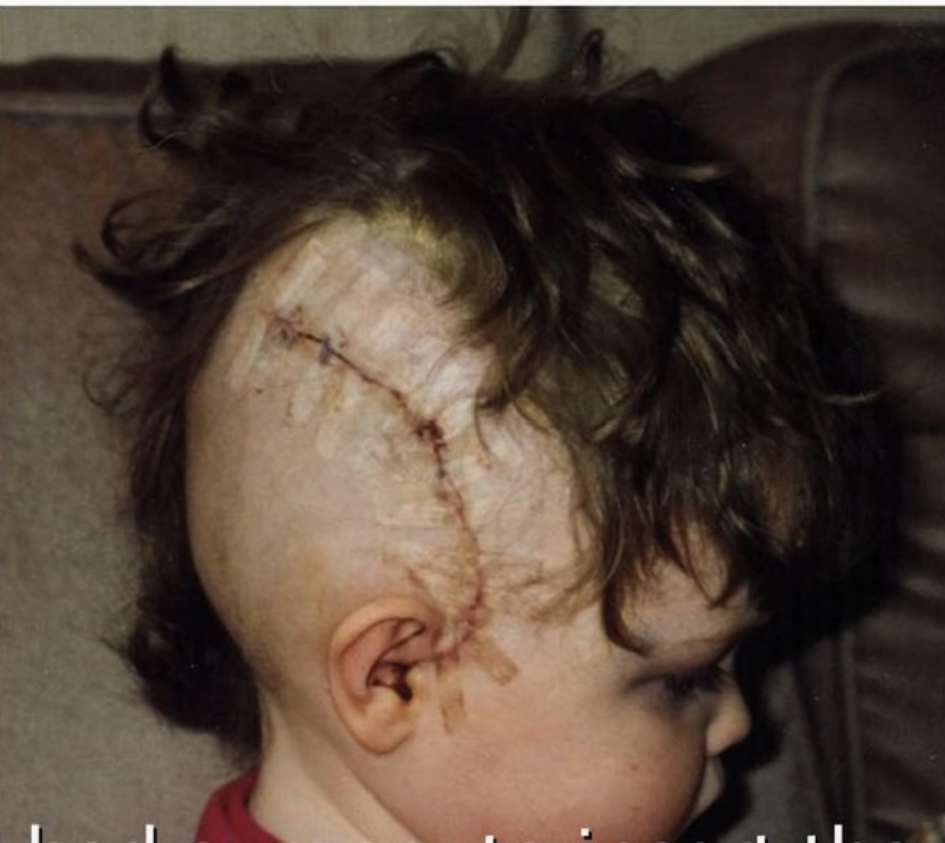
## Reality

baby is healthy  
determination of auditory status  
baby needs language (conscious effort)  
The choice should no more be “yours” than if your baby  
had diabetes and needed insulin.

# What is a cochlear implant?



# Surgery



# FACTS ABOUT COCHLEAR IMPLANTS

- Device surgically implanted in order to help people with severe or total hearing loss that cannot use hearing aids.
- CIs convert sound into electrical impulses, which are then delivered directly to the cochlear nerve at different points of excitation (called channels). Sounds are transformed into electrical impulses and then the brain needs to be taught how to interpret those impulses
- Implants do not restore hearing. They give a deaf person a useful representation of sounds in the environment to help them understand speech if
  - \*they have extensive rehabilitative exercises
  - \*and they are in a quiet space
  - \*and **they are lucky.**

**This is not easy: the child with a CI has to work overtime > cognitive overload**

# CI SIMULATION

(Recommendation – a true star of CI

<https://www.youtube.com/watch?v=icPsm9RnO2E>)

HEARING WITH CI

ORIGINAL SENTENCE





# CI SIMULATION in Context

(Recommendation – a true star of CI

<https://www.youtube.com/watch?v=icPsm9RnO2E>)

[LINK](#)

# National Association of the Deaf position statement 2025

<https://www.nad.org/about-us/position-statements/position-statement-on-early-cognitive-and-language-development-and-education-of-deaf-and-hard-of-hearing-children/>

Young deaf and hard of hearing children continue to experience delayed cognitive and language development in early childhood that lead to academic difficulties and underperformance when they begin schooling. Despite the good intentions of government, schools, and professionals, this condition persists, resulting in significant under-education and underemployment for persons who are deaf or hard of hearing. The effects of early language deprivation or limited exposure to language due to not having sufficient access to spoken language or sign language are often so severe as to result in serious health, education and quality of life issues for these children.

# NAD continued

Listening technology is often beneficial to deaf and hard of hearing children, with augmented hearing aid systems and cochlear implants playing a role in the development of spoken language. However, as discussed earlier, **spoken language development can be enhanced if sign language is also present**. Hearing aids have been acceptable and effective listening devices and cochlear implants can, in some cases, be important in the development of spoken English. However, these technologies and devices vary greatly in their linguistic benefit to individual deaf and hard of hearing children. Humphries, et al (2012a) argue that due to a cavalier treatment of the importance of keeping this kind of data on linguistic benefit, only informed estimates can be made. Such informed estimates indicate that no more than 40 percent of deaf and hard of hearing children who have cochlear implants but do not use sign language get a linguistic benefit from the device. Unfortunately, the remaining 60%, an unacceptably high number (even 5% is too much), are at risk of linguistic deprivation when they are given cochlear implants and speech only exposure to language (Davidson et al., 2014).

# number two

lack of experience with reading -- parents AND deaf children report rarely sharing books in the preschool years

Kargin, Tevhide, Birkan Guldenoglu, Paul Miller, Peter Hauser, Christian Rathmann, Okan Kubus, and Erin Spurgeon. 2012. Differences in word processing skills of deaf and hearing individuals reading in different orthographies. *Journal of Development and Physical Disabilities* 24, 65-83. DOI 10.1007/s10882-011-9255-z

What's going on?

# Often SRAs with deaf children are failures

- The parent is full of anxiety: this moment is a test of the child's academic potential – maybe even of the child's cognitive capacity –
- The child quickly loses interest in the illustrations and starts looking around the room
- The parent gets frightened; maybe their child will never live an independent life!
- The child is aware of disappointing the parent but doesn't know why and doesn't know how to fix things
- Result: STRESS! No one wants to repeat the experience

# But shared reading experiences may be the key

The National Academy of Education Commission on Reading of the United States in 1985 concluded (regarding hearing children): “The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children.”

Through the four decades since, shared reading activities have remained the factor with the strongest positive correlation to good reading skills.

Anderson, Richard C., Elfrieda H. Hiebert, Judith A. Scott, Ian A. G. Wilkinson, Wes Becker, and Wesley C. Becker. 1985/1988. “Becoming a nation of readers: the report of the Commission on Reading, U. S. Department of Education.” Commissioned in Champaign-Urbana, IL: Center for the Study of Reading in 1985. Published in 1988. *Education and Treatment of Children* 11(4): 389-396.

And shared reading is as important for deaf children as for hearing children.

Maybe even more important, because of the great need for development of language interaction skills.

# IN AN SRA BETWEEN HEARING CHILD AND ADULT, WHAT HAPPENS?

They talk about everything. They learn that “conflicts” get resolved by “characters” within a “setting” – As we understand the conflict, we can understand why each character behaves as they do. We can make inferences. We can anticipate – and understand the culmination.

Why did that fox chase the bunny?

Why did the bunny run?

How do you think the bunny felt?

What would you do if you were the fox?

See that hole there? What would you do if you were the bunny?

Which would you rather be: a fox or a bunny?

- NOTE: fiction and nonfiction share “story” form



By talking about these things, children learn about the world.



They learn that different characters have different goals.



They learn how to guess what might happen next in the story.



In this way, they learn about how stories begin and develop and end. So they gain important preliteracy skills.

# The child is active

Linguistically

Cognitively

And sometimes even physically:

*Let's tell the story together, ok?*

*One person will be the rabbit.*

*The other person will be the fox.*

*Who do you want to be?*

Active role playing helps with literacy – the Georgi Lozanov method (1970s); helps in foreign lg classroom (Milivojevic 1979) – these were the foundations for dialogic reading (Zevenbergen and Whitehurst 2003 and many since).

Milivojevic, Dragan. (1979). New directions in foreign language teaching. *Journal of Thought*: 273-279.

Zevenbergen, Andrea A., and Grover J. Whitehurst. 2003. Dialogic reading: A shared picture book reading intervention for preschoolers. In Anne van Kleeck and Steven Stahl (eds.) *On reading books to children: Parents and teachers* 170-192. Mahway, NJ: Lawrence Erlbaum Associates.

# Advantages for the child – what do they gain?

- The vocabulary and syntax of the language
- How to participate in a discussion about a story
- The information in the world of the story
- The structure of narration in general
- A sense of characterization in general
- How to make inferences
- The joy of stories – and that joy contributes to the motivation for doing the hard work necessary to learn to read

# So let's check against our opening list

- The vocabulary and syntax of the language  
[\*7 Build vocabulary and language knowledge]
- How to participate in a discussion about a story  
[\*6 Engage students in discussion of stories]
- The information in the world of the story  
[\*1 Build disciplinary and world knowledge]
- The structure of narration in general  
[\*5 Teach text structures]
- A sense of characterization in general
- How to make inferences  
[\*4 Teach strategies for comprehending]
- The joy of storyreading > motivation to learn to read

# What's missing?

1. -
2. Provide exposure to a volume and range of texts.
3. Provide motivating texts and contexts for reading.
4. -
5. -
6. -
7. -
8. Integrate reading and writing.
9. Observe and assess.
10. Differentiate instruction

8-10 are the responsibilities of classroom teachers –

2-3 are like food – they are nutrition AND

they are OUR responsibilities – we=those who produce books and those who demand that books be produced

# Important Caveat

Benefit for the small child depends on  
ENJOYMENT – not pedagogy.

Thus we need books that do not require that  
parents be trained in how to use them. We need  
books that the parent and the deaf child can  
simply have fun with –  
just like the parent and the hearing child have.

# Shared reading



What problems do you see in this photo for a deaf child sharing a book with an adult?

- They aren't face-to-face, so they can't communicate
- The illustrations are static, so, potentially, boring without language to fill them out. What is the role of illustrations?

# Possible key?

## Bimodal-bilingual videobooks

- The goal is enjoyment: so there's no stress
- The text is there – so the parent feels secure.
- The video immediately captures the child's attention
- The signer is right there, in the middle of the family – so we have a good signing model at home

Learning to sign is difficult. Parents prefer learning by sharing books with their children.

- Weaver, Kimberly A., and Thad Starner. 2011. We need to communicate!: helping hearing parents of deaf children learn American Sign Language. *The proceedings of the 13th international ACM SIGACCESS Conference on Computers and Accessibility*. 91-98. <https://doi.org/10.1145/2049536.2049554>



# Remember points 2 & 3

Provide exposure to a volume and range of texts.

Provide motivating texts and contexts for reading

Unfortunately, there aren't many videobooks for deaf children

We need to make them and help others make them

# RISE

## Videobooks offered free

Gene and Donna Jo, colleagues and friends

Gene: past work with the National Theater of the Deaf

Donna Jo: writing books for children and adolescents

Thanks to our backgrounds, we had the courage to try.

RISE goal— always simply fun.

We are not scholars of pedagogy. We are linguists and creative people, interested in the healthy development of children, where we focus on deaf children because the issue is language access.

# The people who create RISE videobooks

Deaf signers – usually Gene's students – but also deaf people around the globe – including children at deaf schools

And Donna Jo's students: Swarthmore/BMC/HC/UPenn.

We generally collaborate on

- choosing the books to produce
- discussing the best ways to tell the story
- determining the best formatting to serve the story
- producing the videobooks

Gene and DJ coordinate and guide the work. But these books are artistic objects and their creators must prevail. So we guide, but the ones who create the books have final say.

# Characteristics of our books

## **(1) Already published stories or in the public domain (we are unfunded)**

We scour the Internet for books offered free. We negotiate with those who run websites that are nonprofit, making traditional or digital books:

African Storybook <https://www.africanstorybook.org/>

Book Dash <https://bookdash.org/>

Free Kids Books <https://freekidsbooks.org/>

Pratham Books <https://prathambooks.org/>

StoryJumper <https://www.storyjumper.com/>

Unite for Literacy <https://www.uniteforliteracy.com/>

and many others

# demonstration: new public domain

- [LINK](#)

# Characteristics of our books

## (2) Often classics

This allows the deaf child access to classics that is rightfully part of their heritage by being a member of the ambient culture. So far, we have these western Europe stories (as well as classics within countries):

GOLDILOCKS AND THE THREE BEARS

HUMPTY DUMPTY

THE CITY MOUSE AND THE COUNTRY MOUSE

THE GINGERBREAD MAN

THE LITTLE ENGINE THAT COULD

THE LION AND THE MOUSE

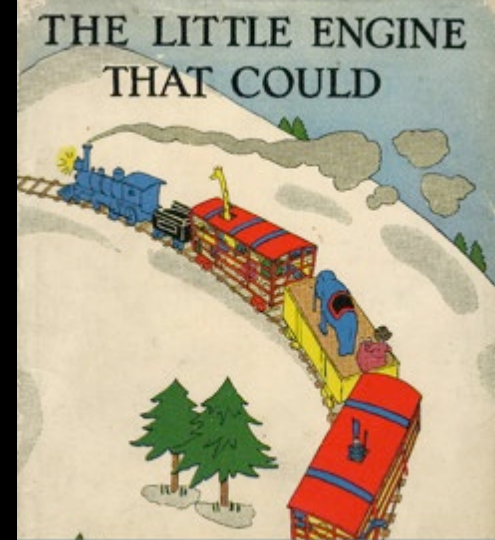
THE NIGHT BEFORE CHRISTMAS

THE TALE OF JEMIMA PUDDLE-DUCK

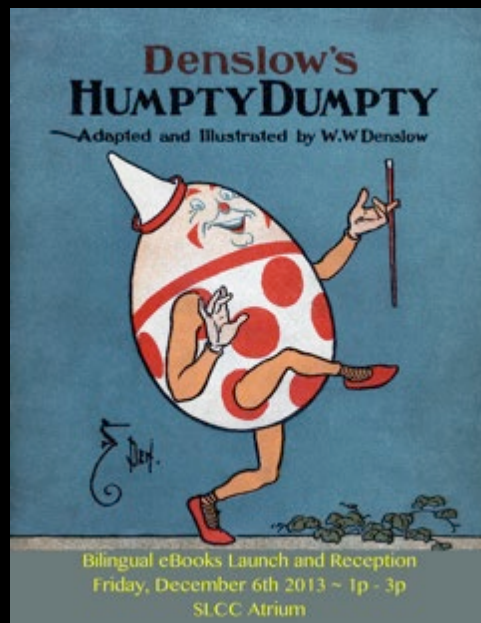
THE THREE LITTLE PIGS



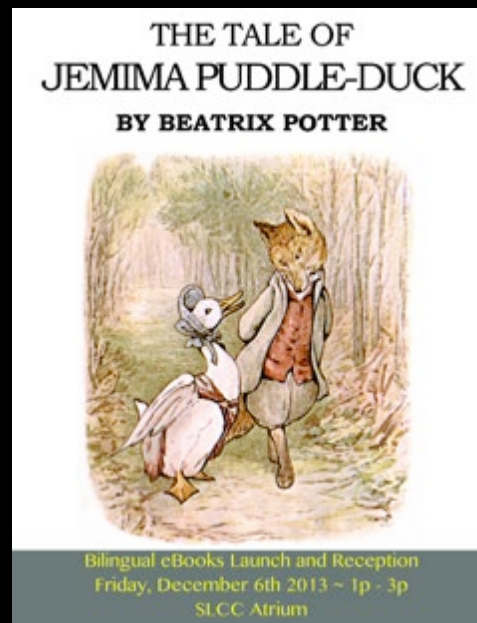
Bilingual eBooks Launch and Reception  
Friday, December 6th 2013 ~ 1p - 3p  
SLCC Atrium



Bilingual eBooks Launch and Reception  
Friday, December 6th 2013 ~ 1p - 3p  
SLCC Atrium



Bilingual eBooks Launch and Reception  
Friday, December 6th 2013 ~ 1p - 3p  
SLCC Atrium



Bilingual eBooks Launch and Reception  
Friday, December 6th 2013 ~ 1p - 3p  
SLCC Atrium

# demonstration of classics

- [LINK](#)



# Characteristics of our books

## **(3) Some nonfiction**

We have

- five books about Covid-19.
  - four books from National Geographic
  - five from Unite for Literacy
- and more.

About animals (including of Africa), food, nutrition, holidays, exercise, race cars, conserving energy.

# demonstration: nonfiction

- [LINK](#)

# Characteristics of our books

## **(4) Some for the tiniest child about:**

- rainbows and colors
- animals inside and outside the zoo
- making friends
- visiting the seaside
- who can live inside an egg
- dressing yourself
- learning how to be helpful
- what “big” and “small” mean
- silly things, like chasing a cat

# demonstration: for tiny child

- [LINK](#)

# **Characteristics of our books**

**(5) The signers have many different personal characteristics, just as the viewers do**

- different races**
- different ages (adults/ children)**
- low vision**
- other deaf plus**

**It empowers the viewer to see a storyteller they can identify with.**

# demonstration: child signer

- [LINK](#)

# Characteristics of our books

**(6) They deal with themes true to deaf experience or that invite the child into new experiences in a welcoming way.**

- Thus, we have stories that deal with sights and touch and smell and taste –stories that deal with mysteries and jokes.**
- But we don't, for example, have stories about people taking a walk at night and being amazed at the sound of an owl – so OWL MOON (an award-winning book) is wonderful for the hearing child but not the deaf child.**

# demonstration: common experience (name sign at beginning)

- [LINK](#)



# Characteristics of our books

(7) Some have text in Spanish or in Spanish and English so that the family whose L1 is Spanish can still share an ASL story with their child.

(We did this in response to a school for the deaf in North Carolina, where many of the families have Spanish as their home language.)

# demonstration: Spanish text

- LINK

# Characteristics of our books

(8) Some have particular aids for the autistic child. (We did this in response to a publishing house in Italy.)

- The American Speech-Language association states that Augmentative and Alternative Communication can be a supplement to speech for hearing autistic children – including sign languages.
- <https://napacenter.org/aac-autism/#:~:text=Benefits%20of%20Sign%20Language%20for,used%20anywhere%2C%20at%20any%20time.>

# demonstration: autism version

- [LINK](#)

# Characteristics of our books

(9) Our books are

Free  
on YouTube

# Characteristics of the Signing

(1) We don't translate. We retell in a way natural to sign languages and a way that will delight (we hope) the children –

**RENDER not TRANSLATE**

For example: opening pages of THE SNOWY DAY by Ezra Jack Keats:

*One winter morning Peter woke up and looked out the window. Snow had fallen during the night. It covered everything as far as he could see.*

Signing would be very different.

# demonstration: rendering

- LINK

# Characteristics of the Signing

(2) We use methods common to sign language literature:

(a) role changing and embodiment

(comparable to voice actions in reading aloud – high voice for mouse; low voice for elephant)



# demonstration: role playing

- [LINK](#)

# Characteristics of the Signing

(2) methods common to sign lg literature

(b) photographic strategies

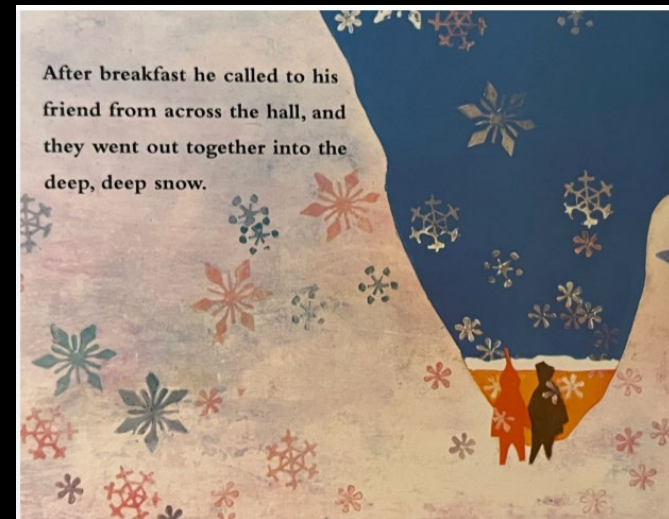
(varying shot distance which we are familiar with from picture books)



CLOSE



MEDIUM



LONG

# demonstration: photographic strategies

- [LINK](#)

# Characteristics of the Signing

(2) methods common to sign language

(c) varying dynamics of signs

(comparable to voice actions in reading aloud – for example letting the voice grow louder in a sentence about a lion growling as he approaches water buffalo or the voice growing softer in a sentence about a cawing bird that is flying from closeby to off into the distance)

# demonstration: varying dynamics

- [LINK](#)

# Characteristics of the Signing

## (2) methods common to sign language

(d) adopting a certain rhythm

(this happens quite naturally in reading aloud in a spoken language too – and this grouping of lexical items together [called **CHUNKING**] helps children process what they are hearing/watching/reading)

# demonstration: rhythm

- LINK

# Characteristics of the Signing

## (2) methods common to sign lg lit

(e) adopting repetition

(a feature common of picture books – which helps in both language acquisition and beginning reading skills )



# demonstration: repetition

- [LINK](#)

# Hoped-for outcomes

- In this way, the signed story makes more visual sense to the child and, we hope, holds the child's attention better. The videos are a friendly way of offering the child (and parent – we're subversive) a good language model, as well as a good story. Both L1 and L2/M2 learners can learn through context-driven visuals plus checking with real world knowledge. The whole family can understand with the help of the illustrations and their world knowledge. Everyone can imitate > learn.
- Result on parent: Desire/encouragement to learn the sign language > classes > interaction with deaf community
- Result on child: preliteracy skills and fun
- Result on family: bonding, enjoyment

# <https://riseebooks.wixstudio.com/access>

America

Austria

Belgium

Brazil

Bulgaria

China

Czech Republic

Ethiopia

Fiji

France

Germany

Grenada

India

Iran

Ireland

Israel

Italy

Japan

Korea

Nepal

Nigeria

Norway

Pakistan

Philippines

Poland

Russia

Saudi Arabia

South Africa

Sweden

Switzerland

Taiwan

Trinidad & Tobago

Turkey

United Kingdom

# Demonstration: DGS

<https://www.youtube.com/watch?v=vCv0InGexTY&feature=youtu.be>

- LINK

# Demonstration: Chinese SL

<https://www.youtube.com/watch?v=El24EiXyBrg>

- LINK

With regard to the deaf child:

We are making more books & of a variety of types

Hearing children have thousands available of all types.

Deaf children need the same.

Bond with your deaf child over fun stories.

This is Ayden in May 2016. He is 2 years old and never showed any interest in a book before. He loved our ebooks and mabbled as he watched.

- [LINK](#)

# Our first joint class: 2013 fall







# Strategies for classroom use

Introducing a new topic:	Literature that relates thematically to a lesson can serve to acquaint a deaf student with the topic at hand.
Supporting deaf identity:	The deaf child who learns to sign the story in a videobook can teach the whole class, showing that ISL is a real language.
Supporting independent reading:	Literature in sign might soothe feelings of frustration and fatigue common among deaf children in a hearing environment.
Supporting the deaf child who has vocalization skills:	Some videobooks have a voiceover. So those children who would like to practice their speech skills can benefit.
Using sign version as preview:	Deaf students can read the video book on their own (perhaps at home) ahead of circle time in order to understand its content.
Using sign version as review:	After a book has been shared in circle time, deaf students can read it on their own to further their understanding.
Comparing sign and text versions for self-assessment:	All students can find out how much English/Irish or ISL they are learning by counting the words and signs they understand before and after the book is shared in circle time.
Learning about iconicity:	All students can make up signs for things and then compare them to the real signs in the stories.
Improving home-school connections :	Videobooks allow deaf family members active involvement in their child's education, whether the child is deaf or hearing, even if their English/Irish skills are limited. Deaf parents can be invited to class to sign with the children. Weekend workshops on signing might be made available, with transportation costs covered by the school.
Supporting family literacy programs:	A great way to start a family literacy program for parents of deaf students is by assisting them in locating videobooks.
Raising awareness of multiculturalism:	Videobooks can raise all children's awareness through exposure to different languages and cultures.
Helping teachers and students learn another language:	Videobooks can help teachers and all children learn some sign. All children can be encouraged to bring the books home to share with their families, so the children can practice signing at home.
Encouraging reading for pleasure:	Our videobooks involve no stress. No one should be 'tested' on them. They are purely for fun.
Supporting students with other language-related issues	Videobooks offer an augmentative communication system for children who have language-related issues, such as autism.