

The Early Literacy Trifecta: Language, Print and Executive Function

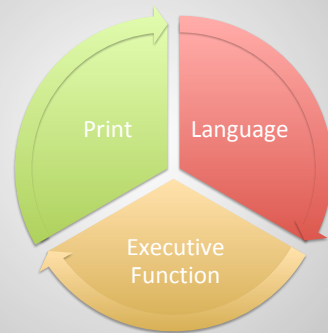
Dr. Julie Washington



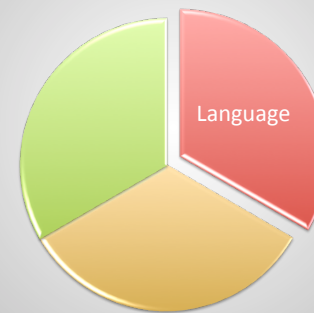
Early Literacy

- Literacy development begins long before a child ever enters a formal preschool or elementary classroom setting, or receives conventional reading instruction!!!
 - Language development from birth
 - Family literacy practices
 - “Environmental” literacy

3 Important Components of Early Literacy Success



Language



0 – 5 years of age

- Rapid Brain Growth and Development
- Critical years for speech and language development
- Provides the foundation for the rest of language, academic, and sometimes social development

Birth – 5 years (words)

0 – 1 year old	0 - 50 words
1 year old	50 - 100 words
2 years old	400 - 500 words
3 years old	900- 1000 words
4 years old	1500 words
5 years old	2200 words

Birth – 5 years (sentences)

0 – 1 year old	Babbling, cooing, crying
1 year old	1 word (“car”)
2 years old	2 words (“my car”)
3 years old	3 words (SVO) (I am hungry)
4 years old	4+ words (“I want to go home”)
5 years old	“I saw the man who was running”

Birth – 5 years (speech)

0 – 1 year old	sound play: /dadada/; early sounds: /p,b,m,n,k,g/
1 year old	VC (“up”); CVC (“juice”);CVCV(“mama”)
2 years old	adding more sounds & combos
3 - 5 years old	Most have been acquired. /r/, /l/, /ch/, /sh/, /th/ & clusters still developing. Intelligibility...

Overall

1. The early years (preschool – kindergarten) are spent building language competence
2. The later years depend upon this early building process for continued strong, growth
 1. Students with poor language skills at school entry experience a “snowball effect” of poor language growth in the years that follow.

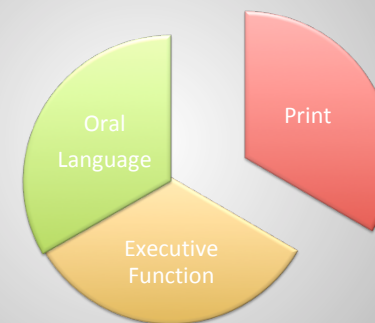
Overall

3. Developmental opportunity is critical: i.e., development of strong language skills is highly influenced by opportunities to practice talking
4. Strong language models matter: i.e., the quality of the input children receive will greatly influence the output.

“30 million word Gap”

- Hart & Risley (1995)
 - By 3 years of age, there is a 30 million word gap between children from the wealthiest and poorest families.
 - “86 to 98% of the words recorded in each child’s vocabulary consisted of words also recorded in their parents’ vocabularies. By 34-36 months of age...numbers of different words used by children were very similar to parents...” (Hart & Risley, 2003)

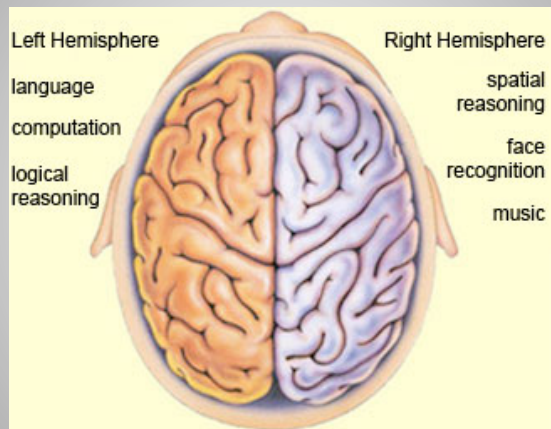
Print



What is Reading?

- “Learning to read is *coming to know how one’s own writing system works*. The child has knowledge of language already. It’s the writing system that must be learned: how the child’s writing system encodes his or her language.” (Perfetti & Marron, 1998; p. 5).

Developmentally, language precedes reading and writing, but then the systems develop in parallel and each system builds off strengths in the other .



- From an evolutionary standpoint, reading is very new (invented 5400 years ago when the alphabet was invented)
- Reading is imposed on our brains
- The brain is wired for language, but it adapts and changes in response to reading
- “Reading literally changes the brain”

What is emergent literacy?

- The term *emergent literacy* was introduced to the reading community in 1966 by New Zealand researcher Marie Clay, who used it to describe “literacy like” behaviors of very young children evident prior to conventional reading.
- *Emergent Literacy* is on the continuum of reading development (pre-reading)

Emergent Literacy

Birth to 2 years of age:

Infants are learning the sound structure, rhythms and tones of the language in their environment. They are also learning to associate these sounds with words and meaning.

Emergent Literacy

In the first year of life:

Babies (approximately 6 months to 1 year) are being read to by the adults in their lives. Children who are read to will begin progression from books as “food,” to playing with the cover, to trying to turn pages. These actions are often accompanied by babbling (Snow, Burns, and Griffin, 1998).

Emergent Literacy

2 to 3 years of age: Very rapid growth of language skills

- Children pretend to read while pointing to and labelling pictures or naming actions in their storybooks. **Environmental print** also becomes more salient to children at this age;
- **Scribbling** advances from drawing circles to producing “text” that young children identify verbally as writing.

Emergent Literacy

3 to 4 years of age: Very rapid growth of literacy and language skills

- By this age, children who have been read to in the earlier years are beginning to “read” books independently;
- No longer labeling pictures, but attempting to tell the story represented by the pictures in the book.

Emergent Literacy

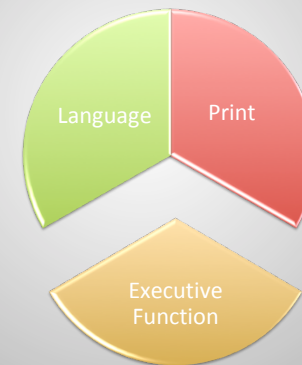
- 5 years of age: Very rapid growth in literacy skills

Considered *emergent readers*, these children are entering kindergarten and encountering conventional reading instruction. “Reading” begins to sound different from oral language as intonation patterns mimic written language patterns. Pictures are used to support reading.

Emergent Literacy

- It is never too soon to read to children (McMahon, 1996)!
- Reading to infants and toddlers helps them to develop a connection between meaning and print
- Most importantly, it develops a lifelong love of reading... this is as important to becoming a good reader as learning early reading skills.

Executive Function



Toxic Stress

- *“Learning how to cope with adversity is an important part of healthy child development. When we are threatened, our bodies prepare us to respond by increasing our heart rate, blood pressure, and stress hormones, such as cortisol. When a young child’s stress response systems are activated within an [environment of supportive relationships](#) with adults, these physiological effects are buffered and brought back down to baseline. The result is the development of healthy stress response systems. However, if the stress response is extreme and long-lasting, and buffering relationships are unavailable to the child, the result can be damaged, weakened systems and [brain architecture](#), with lifelong repercussions.”*
- *([developingchild.harvard.edu](#))*

What is Executive Function?

- EF refers to all of the skills that allow an individual to self-regulate and engage in goal-directed behavior:
 - inhibition, self-regulation, shifting, updating/monitoring, rule learning, working memory, and planning are all EFs
- EF impacts learning. In particular, inhibition, self regulation, motivation, attention and working memory (Raver, Blair & Willoughby, 2013)

EF

- **Inhibition**: the ability to inhibit behavior; it is the opposite of impulsive; delaying gratification is a kind of inhibition
- **Self Regulation**: the ability to calm down or amp up as required; also called emotion regulation

Raver, Blair & Willoughby (2013)

- A recent set of findings suggests that poverty and poverty-related stressors are generally associated with lower executive function ability, and compromised self-regulation for young children (Blair et al., 2011; Evans, 2003; Evans, Gonnella Marcynyszyn, Gentile, & Salpekar, 2005; Hackman & Farah, 2009; Noble et al., 2007).

EF in Preschool

- Young children who are persistently sad, withdrawn or disruptive have been found to receive less instruction, to have fewer opportunities for learning from peers, and to be less engaged and less positive about their role as learners (Arnold et al., 2006).

EF in Preschool

- Low income children are overrepresented in discipline referrals
 - The literature refers to these as “behavior problems.”
- In reality, for most of these children these behaviors arise from difficulty with self regulatory and inhibitory skills.

EF in Preschool

- Due to poverty stressors, children in poor neighborhoods are at greater risk for developing emotional and behavioral difficulties (Raver et al, 2008)
- There is growing evidence that the onset of these behavior problems is during the toddler years.

Other overrepresented subgroups (www.ocrdata.ed.gov):

- Black children represent 18% of preschool enrollment, but 48% of preschool children receiving more than one out-of-school suspension;
- Boys represent 79% of preschool children suspended once and 82% of preschool children suspended multiple times, although boys represent 54% of preschool enrollment.

EF in Preschool

- 67% of young children in the United States are enrolled in center-based or non-relative care prior to enrollment in Kindergarten (Innes, Denton, & West, 2001).
- This makes preschools an important setting for addressing these issues at early ages

- Many of the “classroom management” concerns that teachers have are actually self management issues for many children that manifest in a disruptive way in the classroom.

What does this have to do with early literacy??

- In the school context, EF can be thought of as children's abilities to resist distractions, to control their thinking, and to engage in goal-directed activities that promote learning (Ursach et al, 2011).

They are inextricably tied!

