



Learning My ABCs and Writing Them, Too!

Research-Based Alphabet and Writing Instruction for Young Children

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Definitions

- **Early literacy** learning is defined as the time period from birth to six years of age (Robyak, Masiello, Trivette, Roper & Dunst, 2007).
- **Early reading and writing** occur in kindergarten into the early elementary grades.
- **Early Childhood** is the period from birth through age 8.





NAEYC : DAP (2009)

“The point of the whole preschool-primary spectrum [education] is *not* for children to learn primary grade skills at an earlier age; it is for their teachers to take the first steps together to ensure that young children develop and learn and to be able to acquire such skills and understandings as they progress in school.”

National Association for the Education of Young Children
Developmentally Appropriate Practice, 2009



Developmentally Appropriate Practice

- A hallmark of developmentally appropriate teaching is **intentionality**. Good teachers are intentional in everything they do— setting up the classroom, planning curriculum, making use of various teaching strategies, assessing children, interacting with them, and working with their families. (NAEYC, 2009)




TOPICS

Research Findings
Developmental Trends
Instructional Approaches




Letter Naming . . .

- Research on letter naming and its role in preparing children for literacy success has a long history.
- For example, see Chall, 1967/1983; Durrell, 1980; Ehri, 1983; Foulin, 2005; Groff, 1984; Mason, 1984; Piasta & Wagner, 2010; Treiman & Kessler, 2003.





Developing Letter Knowledge

When learning alphabet letter names, young children typically:

- recognize and name a few letters (especially the ones in their names);
- recognize beginning letters in familiar words;
- learn uppercase letters first and then lowercase letters; and
- relate some letters to the specific sounds the letters represent.

(NAEYC, Neuman et al., 2000)




Narrow Window for Alphabet Learning

- **Floor effects** in preschool children (e.g. Burgess & Lonigan, 1998; Carroll, Snowling, Hulme, & Stevenson, 2003)
- **Ceiling effects** in studies with older children (e.g. Wise et al, 2007)

(Ouellette & Haley, 2013)




Predicting Later Reading Development

The **best TWO** predictors of reading achievement from early kindergarten to 2nd grade are:

- Phonemic awareness (sound isolation)**
- Letter name knowledge**

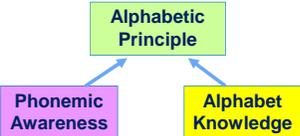


(National Reading Panel, 2000)




Alphabetic Principle

the understanding that there is a systematic relationship between letters and speech sounds.



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    graph TD
      A[Alphabetic Principle]
      B[Phonemic Awareness] --> A
      C[Alphabet Knowledge] --> A
    
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Letter-Naming Abilities...

- In preschool and kindergarten is a well-established predictor of children's later literacy skills (Hammill, 2004; National Early Literacy Panel, 2008; Scarborough, 1998; Schatschneider, Fletcher, Francis, Carlson, & Foorman, 2004).
- For example, when assessed at ages 3.5 years, 4.5 years, and 5.5 years was the most consistent predictor of 2nd grade word reading and spelling disabilities. (Puolakanaho et al. 2007)




Letter Knowledge . . .

- There is a relationship between early letter knowledge and later literacy skills, independent of children's age, socioeconomic status, IQ, or other emergent literacy skills, such as oral language and phonological awareness.

(National Early Literacy Panel, 2008; Snowling, Gallagher & Frith, 2003, Storch & Whitehurst, 2002).





Letter Names → Sounds

- Letter names serve as an entry point into learning letter sounds and understanding the alphabetic principle.
- Children extract the sound cues in letter names (e.g., CV /bē/ in B or VC /ēf/ in F).
- Evidence for this can be found in the invented spellings of young children (e.g., r for are, yt for what, etc.)

(Bailet, et al., 2009; Evans et al., 2006; Foulin, 2005; Mann & Foy, 2006; Piatsta & Wagner, 2010; Treiman, Tincoff, Rodriguez, Mouzaki, & Francis, 1998)




Letter Name Knowledge

- LNK at entry into kindergarten was the best individual predictor of K reading achievement and second best after phoneme segmentation in first grade reading achievement.
- LNK allows children to bridge the gap between visual-cue strategy to phonetic-cue strategy in early literacy.
- LNK contributes to phonemic sensitivity. (Foulin, 2005)




Phonemic Awareness Skills

- Phonological skills may be the catalyst for letter name to sound knowledge
 - being able to segment the sounds in letter names “b” into /b/ /e/

(Piasta & Wagner, 2010)




4 Phases of Word Reading and Spelling Development

1. Prealphabetic
2. Partial Alphabetic
3. Full Alphabetic
4. Consolidated Alphabetic

(Ehri, 2014)




Prealphabetic

- May or may not know letters
- Lack of phonemic awareness
- No grapheme-phoneme connection between spellings and pronunciations
- Sight words learned by remembering salient visual or context cues
- No non-word decoding ability
- Words spelled nonphonetically

(Ehri, 2014)




Partial Alphabetic

- Most letter shapes and names known
- Limited phonemic awareness; benefit of articulatory awareness instruction
- Partial grapheme-phoneme (GP) connections formed
- Sight words learned by remembering partial GP connections
- Little or no non-word decoding ability
- Partial phonetic spellings invented

(Ehri, 2014)





Full Alphabetic

- Major GPs of writing system known
- Full phonemic awareness; segmentation and blending
- Complete GP connections formed
- Sight words learned by remembering complete GP connections
- Growing ability to decode unfamiliar words and nonwords
- Phonetically accurate spellings invented (Ehri, 2014)




Consolidated Alphabetic

- Grapho-syllabic spelling units known
- Grapho-syllabic connections predominate
- Sight words learned primarily by grapho-syllabic connections
- Can decode unfamiliar words and nonwords proficiently
- Grapho-syllabic and GP units to invent spellings (Ehri, 2014)



Research on young writers (K – 4th grade)



- The ability to transcribe words into written symbols fluently and accurately is essential for fluent production of quality writing.
- Composition (content and organization) will be limited in the intermediate grades if spelling and handwriting are poor.
- Children need a great deal of systematic practice to master the tools of writing. (Berninger et al., 2006)



Characteristics of Poor Writers



- Primary and significant problems with transcription (spelling, handwriting, punctuation)
- General language deficiencies
- Limitations of working memory, difficulty planning, organizing, retrieving, and sorting. (Moats, 2009)



Importance of Writing in Young Children



Handwriting is directly related to:

• letter recognition	• oral language
• reading comprehension	• phonological processing
• decoding	• grammatical ability
• sound-letter association	• attention
• spelling	• visual-motor skills
• orthographic ability	

(Feder & Majnemer, 2007; Kim et al., 2013; Puranik & Al Otaiba, 2012)




Challenges of Letter Learning

- Letter names are arbitrary and designated by cultural convention.
- Letter shapes are similar and easily confused.
- Many letters have different upper and lower case forms.
- Letter names generally sound similar. (Adams, 2013)





Alphabet Knowledge

Understanding of letter forms, names and corresponding sounds

–Measured by:

- recognition
- production
- writing



(National Early Literacy Panel, 2008)




What is in a LETTER?

- Graphic shape
- Name
- Sound
- Recognition rate



Each has a contribution and all must be considered separately.




SAME

SIMILAR

DIFFERENT




Similar Sounding Labels

/ā/ /ē/ /ě/

/ū/ /ī/ /ō/ /ah/




Acroponic Principle

- Initial phoneme of the letter's NAME corresponds to the letter's SOUND.
- Consider: CV, VC, inconsistent match, no match and interference
- Sort the consonant letters into these categories.




CV VC Inconsistent Match No Match

Letter Interference



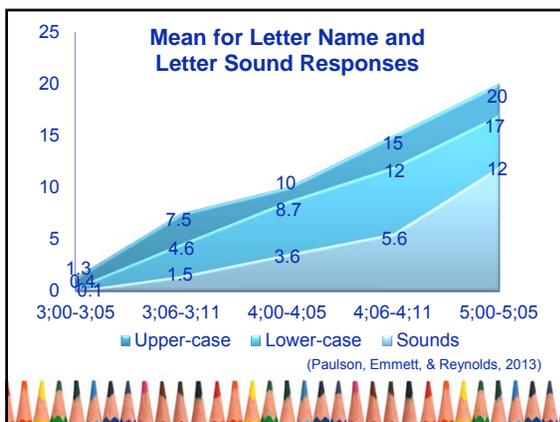
Letter name knowledge in 3-4 yr. olds (Justice et al., 2006)	Impact Size
Own-name advantage	11 X
Any letter	1.5 X
Initial letter	7.3 X
Alphabet order hypothesis	1.02 X
Letter-name/sound pronunciation effect	n.s.
CV vs VC	1.8 X
CV vs NOT	
Consonant order hypothesis	1.09 X



Letter Name Learning

- Considering literacy outcomes of word identification, spelling, and passage comprehension in first grade and . . .
- Looking at sensitivity, specificity and positive predictive power:
 - Optimal benchmark at P-K to K of:
 - **18 uppercase**
 - **15 lowercase letters**

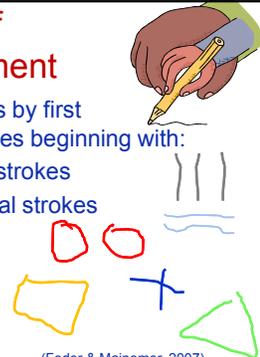
(Piasta, Petscher, & Justice, 2012)



Foundations of Print Development

Child learn to print letters by first imitating geometric shapes beginning with:

- 2 years vertical strokes
- 2 ½ years horizontal strokes
- 3 years circles
- 4 years cross
- 5 years square
- 5 ½ years triangle



(Feder & Majnemer, 2007)

Importance for Memory



- By drawing with horizontal and vertical strokes, children retain these movements in their memory, which will develop into motor memory to help with letter writing. (Feder & Majnemer, 2007)

Writing Development in Infants and Toddlers



- discover crayons/pencils/pens leave marks
- explore crayons/pencils/pens through scribbling
- learn to imitate others using crayon to make isolated strokes in horizontal and vertical directions
- learn to imitate diagonal lines and circles
- learn to imitate simple shapes made from straight lines and circles

(Berninger et. al, 2006)

Writing Development in Preschoolers



- learn to name alphabet letters
- learn motor control to use a pencil by connecting dots in drawings, staying in lines in mazes, and by tracing over alphabet letter forms
- learn to imitate adults making alphabet letter forms

(Berninger et. al, 2006)



Writing Development in Early Elementary Children



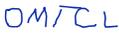
- learn to copy upper case and lower case alphabet letter forms accurately
- can name all the upper case and lower case alphabet letters when presented in a random order
- write dictated letters in both cases accurately from memory

(Berninger et. al, 2006)



Print Developmental Sequences



1. Pre-conventional
 - Scribble 
 - Mock Letter 
 - Random Letter Strings 
2. Semi-phonetic 
3. Phonetic 
4. Transitional 
5. Conventional 



Writing Components to Consider



- Message writing
- Name writing




Written Language Knowledge in Preschool



- Study conducted by Puranik and Lonigan (2011)
- “From Scribbles to Scrabble: Preschool Children’s Developing Knowledge of Written Language”
- Looked at:
 - letter writing
 - word writing
 - message writing
 - own name writing



5 Writing Tasks



- Write Letters (10 letters named by examiner)
 - B, D, S, T, O, A, H, K, M, C
- Name Writing
- Write CVC Words (6 words)
 - (ie. mat, bed, duck, cat, fell, hen)
- Picture Description
- Sentence Retell

(Puranik & Lonigan, 2011)



Task	Max	3-year-olds		4-year-olds		5-year-olds		2-Group Contrasts
		Mean	SD	Mean	SD	Mean	SD	
Write Letters	20	3.27	4.93	9.66	6.76	13.01	6.51	3<4, 5; 4<5
Write Name	9	4.20	3.21	7.23	2.45	8.09	2.19	3<4, 5; 4<5
Write CVC Words	42	5.23	8.39	15.85	10.51	20.04	9.85	3<4, 5; 4<5
Picture Description	7	0.70	2.69	1.76	4.02	2.10	4.10	(not significant)
Sentence Recall	7	0.67	2.59	3.27	4.90	3.71	5.31	3<5

(Puranik & Lonigan, 2011)

Summary of Results



- Writing develops on a continuum from scribbling to conventional spelling
- Easier writing tasks contained more advanced features
- Lower level skill knowledge transfers to upper level skill performance

(Puranik & Lonigan, 2011)

Writing Features Analyzed



- Linearity
- Segmentation
- Simple Characters
- Left-to-Right Orientation
- First Letter of Name
- Complex Characters
- Random Letters
- Many Letters
- Write First Name

Universal Knowledge

Language-Specific Knowledge

Writing Feature Scoring for Write Name Task



(Puranik & Lonigan, 2011)	Age Group		
	3-year-olds	4-year-olds	5-year-olds
Write First Name	13.3%	45.8%	72.3%
Linearity	66.7%	89.1%	96.5%
Segmentation	70.4%	88.6%	94.3%
Left-to-Right Orientation	53.3%	90.5%	92.9%
First Letter of Name	56.7%	78.6%	90.1%

Implications



- Teaching of writing should be sequential.
- Name writing ability could indicate what type of writing instruction may be most valuable from universal features to language-specific features.
- Young children should be encouraged to write at their developmental level.
- Prompts, cues, and modeling should be used in writing instruction.

(Puranik & Lonigan, 2011)

Teaching Letter Knowledge



- A comparison of alphabet instruction in preschool curricula shows:
 - Some do not make mention of explicit instruction of letters
 - Instruction in ABC order
 - Instruction based on letter frequency
 - Instruction in letter sound only
 - Instruction in lowercase letters

(Justice et al., 2006; Piasta & Wagner, 2010)



Teaching Letter Knowledge

- Letter of the week instruction is based on tradition
 - It takes 26 weeks for to cover the alphabet.
 - Some letters are easier to learn than others.
 - Some children already know some letters.
 - Repetition and practice are required for learning. (Justice et al., 2006)



Meta-Analysis of Alphabet Learning and Instruction

- Instruction in alphabet knowledge has modest effect sizes.
- Letter-name instruction led to significant impacts on letter-sound knowledge.
- Letter-sound (only) instruction led to letter-sound learning (not letter-name learning).
- Instruction in greater duration was more effective.
- Small groups (compared to 1:1 tutoring) was more effective. (Piasta & Wagner, 2010)



Meta-Analysis of Alphabet Learning and Instruction

Why only modest effect sizes?

- Alphabet learning may require significant amounts of rote memorization and repeated practice.
- Letter-name and sound instruction were embedded in a broader literacy program.
- Children have opportunities to learn about letters in other settings.
- This may reflect our current ability to teach alphabet knowledge in the early literacy period. (Piasta & Wagner, 2010)



Strategies for Teaching Alphabet Knowledge

Explicit lesson format includes teacher modeling and guided practice for:

1. Upper- and lower-case letter name identification
2. Letter sound identification
3. Recognizing the letter in text
4. Producing the letter form

(Jones, Clark & Reutzel, 2012)



Consider these cycles:

1. **Own name advantage**
 - Learning advantage for initial letter in children's names
 - Highly motivating and responsive to developmental needs
2. **Alphabet order advantage**
 - Learning advantage for alphabet sequence
 - Serial effects with advantage for beginning and ending (Jones, Clark & Reutzel, 2012)



3. **Letter name-sound relationship**

- Learning advantage for letters with sound connection and for letters with single sound
- May spend less time on letters with sound connections and more on more difficult letters

4. **Letter frequency**

- Learning advantage for environmental exposure
- Teaches focus on letters in text

(Jones, Clark & Reutzel, 2012)





5. Consonant acquisition order

- Learning advantage of developmental speech sound acquisition
- Teaches earlier developed sounds before later developing sounds

6. Distinctive visual features in writing

- Learning advantage based on distinctive features in written letter form
- Teaching emphasizes distinctive features between similar letters (Jones, Clark & Reutzel, 2012)




Preliminary Results

- Letter per day instruction in 9 to 12 minute lessons
 - 5 weeks to present 26 letter names and sounds
 - 7 possible distributed review cycles throughout the school year
- Instructional time can focus more efficiently on letter names and sounds that are more difficult to learn.

Results showed a significant decrease in the number of kindergarteners benchmarked at-risk.

(Jones, Clark & Reutzel, 2012)




What do we really know?

- Letter-name knowledge precedes letter sounds knowledge – and both are important.
- There are WIDE developmental ranges and a narrow window of development.
- Many characteristics influence letter learning.
- Explicit instruction has larger effect sizes than embedded instruction.
- Alphabet learning most likely requires significant amounts of rote memorization and repeated practice.
- Multi-component instruction is effective.




Teaching Writing

- Teaching of writing should be sequential.
- Name writing ability could indicate what type of writing instruction may be most valuable from universal features to language-specific features.
- Young children should be encouraged to write at their developmental level.
- Prompts, cues, and modeling should be used in writing instruction.

(Puranik & Lonigan, 2011)



**What I Think, I Can Say.
What I Say, I Can Write.**



Katahira Teaching Method

- Teacher's role
 - Models idea generation
 - Writes thought word by word
 - Segments sounds of each word and attaches letter pattern to sound
- Children write using the modeled strategy learning phonological and orthographic connections.

(Berninger, 2009)



Skills for Developing Writing



Writing is a complex process that requires the integration of a number of skills:

- understanding print
- developing motor skills
- generating ideas

Skills to be continuously taught and supported:

- pencil grip
- letter formation
- letter-sound correspondences
- conventions of print

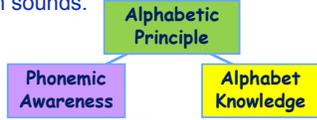




- Encouraging children to write is an effective way to support phonological awareness. (Dickinson et al., 2001)

Alphabet Knowledge Leading to the Alphabetic Principle

- **Alphabet knowledge** - understanding of letter forms, names and corresponding sounds with the idea that spoken words are represented by written symbols.
- **Alphabetic principle** - the understanding that there is a systematic relationship between letters and speech sounds.



Strategy "Picture Story/Word Story"



Picture Story
Create a writing plan by drawing a picture related to a recent activity.

Word Story
Teacher writes a simple sentence describing the picture modeling the levels of print development writing the same sentence at various levels.

I like cookies.
I lik cukez.
I L K.
MDXXOOMX
~?~?~?~?~?~?~?

Picture Story/ Word Story



- A technique that can be used to engage young children in writing by demonstrating for them the developmental levels of writing.
- This approach helps children feel comfortable writing at their own level and helps them move onto the next level. (Paulson, et al., 2001)

Print Level	Sentence Form
Phonetic	
Semiphonetic	
Random letter string	
Mock letters	
Scribble	

What level of print should you model...



For a child who is:
Scribbling?

Using mock letters?

Using random letters?

Writing in a semiphonetic manner?

"The Effect of Modeled Writing on Early Literacy Development in Preschool Children"



A study looking at the impact of adult modeled writing on early literacy skills in preschool children that took place in Head Start classrooms 2 times a week over 10 weeks.

- 2 experimental classrooms
 - Modeled writing of all stages
- 2 comparison classrooms
 - Adult writing only
- 2 control classrooms
 - Business as usual

} The children got to write in their journals during center time.

Paulson, Dobie, Kenyon, McCauley, & Oligmiller, 2015



"The Effect of Modeled Writing on Early Literacy Development in Preschool Children"



- Pre and post measurements of the children's early literacy skills were collected using the screening tool in "Building Early Literacy and Language Skills" (Paulson, et al., 2001) in the areas of:
 - Print Knowledge
 - Oral language
 - Phonological Awareness



Conclusions

- Comparison and control grew at similar rates
- Only experimental groups had change in relative position
- Older children responded better to intervention than younger children (i.e. 5-year-olds benefited more than the 3-year-olds).
- Showing children adult models and having them write did not impact their progression through the writing stages.



Teaching Tips



- Encourage children to use their own creative "kid" or temporary writing.
- Scaffold their understanding of how words work.
- Identify the letter sounds and choose letters that represent sounds.
- Do not focus on correct spelling, focus on the sounds.
- When children complete their stories have them read their sentence(s) to an adult. If their words are not recognizable, write the child's story correctly on the back of the page.



Wide Range of Writing Activities



- "kid writing"
- dictating stories to us to write for them
- writing letters learning how to shape them
- writing their names and other words
- drawing
- playing with letters
- etc...




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