The Development of Young Children's Spelling Ability

Dr. Ann C. Sharp
Educational Literacy Researcher and Consultant
Orthography

Orthography is the study of a writing system’s spelling patterns

- The English writing system is alphabetic
- Chinese writing system is logographic
- Japanese writing system is syllabic.
Historical Overview

Why Study Spelling? I mean really, why?

- In the 1960s researchers thought spelling was not very challenging (Jensen, 1962)
- Educators saw spelling as a mere convention (Thompkins, 2003).
- Common public attitude: “BORING!”
Historical Overview

Despite Misconceptions

- Durkin (1966) discovered that children who learned how to spell before they learned how to read, their writing led to their ability to read.

- Researchers and educators alike became curious!
Historical Overview

The Development of Early Writing Behaviors (C. Chomsky, 1971)

- Children use their knowledge of letter names and sounds to write words.
- Children’s spellings were attempts to use the phonemic (sound) structure of our English language.
- Not a mere memorization task!
Historical Overview

Inventive Spelling is Born

- Read was a student of C. Chomsky’s.
  - In the 1980’s he observed preschoolers’ writings who had not yet learned to read.
  - Children’s attempts demonstrated an understanding that letters symbolized sounds.
  - These attempts were nicknamed *inventive spelling*. 
Historical Overview

Characteristics of Invented Misspellings

- Spell words using letter names
  (EGL for eagle)

- Omit preconsonantal nasals
  (BUPY for bumpy).
  Preconsonantal nasals = bump, land, went

- Spelling is a deductive process of figuring out relationships between sounds and letters.
Historical Overview

Spelling Coming Up in the World!

- Spelling now a way to encode speech
- Spelling conventions are no longer seen as arbitrary
- Researchers postulated theories about spelling and even debated them
- Spelling research begins to provide insights into reading development
- Literacy scholars pursue the relationship of reading to writing
Henderson (1980) and Frith (1985) noticed when looking at the characteristics of children’s misspelled words that they could categorize spelling attempts into stages of spelling growth.
Developmental Characteristics

Henderson’s Spelling Theory

- Henderson examined the spelling of elementary school children
- Proposed that spelling developed from six distinct stages
  - Non phonetic
  - Semiphonetic
  - Phonetic
  - Within Word
  - Syllable Juncture
  - Derivational Constancy
Developmental Characteristics

Nonphonetic Stage

BQS2NF = a letter to a child’s grandmother

- Pretend writing
- Random letterforms
- Not connected to speech
- Sometimes use numbers to spell

Non-phonetic = no evidence of phonological insights
Developmental Characteristics

Semiphonetic Stage

BD for bed  or  RUDF for Are you deaf?

- Omit vowels and the final sounds
- Discern the initial sounds first followed by the final sounds and then the medial sounds
- Begin to recognize that letters correspond with phonemes
Developmental Characteristics

Phonetic Stage

- Consonant blends in both the initial and final positions are often partially represented.
  - *clap* often spelled *cap*
  - *jump* often spelled *JUP*
- Schwa vowels often omitted
  - *tunnel* often spelled *TUNL*.
- Short consonant-vowel-consonant (CVC) words spelled correctly.
  - *cat* *hop* *nut* *lip* *red*
- Vowel sounds misrepresented
  - BAD for *bed*, or SEK for *sick*.)
Developmental Characteristics

Phonetic Stage (continued)

- Long vowels are correct but without the orthographic features that sets them apart
  - *smile* often spelled SMIL
- Past tense –*ed* endings and the plural *s* are represented phonetically
  - *marched* often spelled MRCHT
  - *tens* often spelled TENZ.
Developmental Characteristics

Within Word Stage

- Start paying attention to English orthography (spelling patterns)
  - Recognize that *ck* never begins a word
  - Use silent vowel markers like the silent *e*
  - Confuse silent vowel markers
    - Spelling SNAIK for *snake* or FELE for *feel*
  - Overgeneralizations are common
    - Spelling NETE for *net*
Developmental Characteristics

Within Word Stage (continued)

- Children start to concentrate on patterns within words
- Begin to realize some words do not have sounds that map one-on-one with letters
  - the spelling of *sion* in mansion
  - *have* and *some* do not have a long vowel but are spelled as if they do.
Developmental Characteristics

Syllable Juncture Stage

- Looking at spelling patterns across syllables
- Polysyllabic words with inflected endings often require manipulation of the root word
  - hop/ hopping versus hope/hoping
- Prefixes absorbed in the spelling of a root are the most complex
  - addition and community).
Developmental Characteristics

Derivational Constancy Stage

- Learning about the derivational principles of some polysyllabic words
- Learning about Latin or Greek roots and their word meanings
- Find out that meaning and pronunciation can change but spelling remains constant
  - *nation* and *national*
Many confusions are common, normal and eventually give way to correct spelling

- Confusions about schwa sound spellings
  - BENAFIT for benefit
- Confusions about silent consonants
  - CONDEM for condemn
- Vowel alternations in derivationally related pairs
  - COMPUSITION for composition
- Confusion about silent letters
  - INDITEMENT for indictment
- Uncommon roots
  - EXHILERATE for exhilarate
Developmental Characteristics

Derivational Constancy Stage (continued)

- Derivational constancy implies
  - When competent spellers make an error their spelling errors are likely the derivational type
  - National Spelling Bee contestants formally study languages to understand derivations

- Phonics instruction, phonemic awareness, and more and more reading cause spelling to become more complete
Spelling and Phonemic Awareness

Linguistics, Closely Tied to Spelling

- Spelling is mapping symbols to language
- English writing system symbols are the alphabet
- Beginning stages of spelling requires mapping the smallest sound units to letters
- Smallest unit of sound = phoneme
- Phonemic awareness = being aware of phonemes
# Phonological Structures

<table>
<thead>
<tr>
<th>EASIEST</th>
<th>RHYMING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest sound unit</td>
<td>(big, pig, wig)</td>
</tr>
<tr>
<td>No letter knowledge needed</td>
<td>SYLLABLES</td>
</tr>
<tr>
<td></td>
<td>(sci /en/ ti/ fic)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTERMEDIATE</th>
<th>ONSET/RIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound units are getting</td>
<td>b-ack</td>
</tr>
<tr>
<td>smaller</td>
<td>st-ick</td>
</tr>
<tr>
<td>Some letter knowledge</td>
<td></td>
</tr>
<tr>
<td>needed.</td>
<td></td>
</tr>
</tbody>
</table>

| HARDEST                      | PHONEMEIC                      |
|------------------------------| AWARENESS                     |
| Smallest sound unit          | b-a-t                         |
| Child gets better with       | sh-i-p                        |
| reading and writing.         |                               |
Spelling and Phonemic Awareness

Phonemic Awareness is Important!

- Phonemic awareness allows children to segment spoken words into individual sounds and then relate them to letters.
- Phonemic awareness is a prerequisite skill to learning how to spell and learning how to read.
Spelling and Phonemic Awareness

Phonemic Awareness can be difficult!

- Two reasons why:
  - More attention given to meaning than sound
  - Speech is one steady stream of sound

- Lack of phonemic awareness is the number one predictor for spelling and reading failure
Spelling and Phonemic Awareness

Good News!

- Phonemic awareness can be taught!
- Spelling helps!
- Phonemic awareness is a reciprocal process to spelling
- Phonemic awareness and spelling develop in synchrony
Spelling and Phonics

Spelling and Phonics are Reciprocal

- Phonics is knowing the symbol/sound complexities of our writing system.
- Phonics helps us decode the letters of the alphabet into meaningful words.
Spelling and Phonics
Try To Decode

gress
shinique
litperide
orthophobia
Spelling and Phonics

Spelling and Phonics are Reciprocal

- Spelling is knowing the sound/symbol complexities of our writing system
- Spelling helps us encode the sounds of the alphabet into meaningful words
Spelling and Phonics

How Did You Do?

tay

sess

depine
darlanker
Spelling and Phonics
Mirror Processes

We use the encoding process to spell.

We use the decoding process to read.
Spelling and Phonics

Similarities

READING

- Connections between written and spoken words
- Segmenting spoken words into phonemes
- Recognize how letters correspond to sound

SPELLING

- Connections between spoken and written words
- Segmenting spoken words into phonemes
- Recognize how sounds correspond to letters
<table>
<thead>
<tr>
<th>Spelling and Phonics</th>
<th>Reading Stages vs Spelling Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Alphabetic</td>
<td>Non-Phonetic</td>
</tr>
<tr>
<td>Pretend reading</td>
<td>Pretend writing</td>
</tr>
<tr>
<td>Semi Phonetic</td>
<td>Semi Phonetic</td>
</tr>
<tr>
<td>Maps letters to sounds</td>
<td>Maps sounds to letters</td>
</tr>
<tr>
<td>Phonetic</td>
<td>Phonetic</td>
</tr>
<tr>
<td>Reads CVC words</td>
<td>Spells CVC words</td>
</tr>
<tr>
<td>Reads long vowel words</td>
<td></td>
</tr>
</tbody>
</table>
## Spelling and Phonics

### Reading Stages vs Spelling Stages

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consolidation</strong>&lt;br&gt;Reading words on higher and higher levels of difficulty</td>
<td><strong>Within Word Pattern</strong>&lt;br&gt;Spells long vowel patterns&lt;br&gt;Over generalizes long vowel patterns</td>
</tr>
<tr>
<td><strong>Syllables and Affixes</strong>&lt;br&gt;Learning about multisyllabic words and how affixes are spelled</td>
<td><strong>Derivational Relations</strong>&lt;br&gt;Looking at Greek and Latin Roots and how they affect spelling</td>
</tr>
</tbody>
</table>
Implications for Instructions

Spelling and Reading

- The development of spelling ability provides insights into how to better teach spelling.
- Studying spelling provides insights into how to better teach reading.
Implications for Instructions

Inventive Spelling

- We are no longer alarmed with children’s inventive misspellings.
- Inventive spelling is a window into the progress the child is making to acquire literacy.
- Developmental spelling lists are one indicator to determine overall literacy development.
Implications for Instructions

Instruction matters!

- Spelling and reading are not natural. They are conventions invented by man.
- Instruction drives the development of critical understandings.
- Instruction makes the difference between a child progressing quickly or moving more slowly.
Implications for Instructions

Components of Effective Instruction

- Combine with phonemic awareness and phonics instruction
- Strategic
- Systematic
- Driven by Development
- Explicit
- Taught in a Literacy Rich Environment
Implications for Instructions

Combined with Phonics

Students who struggle learn to read and spell with intensive strategic training in:

- **Phonemic awareness**
  
  breaking down words into their sound units (specifically the smallest sound units, like cat = /k/ + /a/ + /t/ called phonemes)

- **Phonics**

  (understanding the relationship between letters and their sounds to make words)
Implications for Instructions

Benefits of Combined Instruction

1. Increase **phonemic awareness**
2. Improve **writing and reading**
3. Encode and decode **strategically**
4. Process **accurately**
5. Develop **automaticity**
Implications for Instructions

Spelling strategies

- Spelling strategies used:
  - Guessing
  - Sounding Out
  - Rule Use
  - Analogy (if I know dog then I can spell hog)
  - Visual Checking
  - Complete Retrieval
Implications for Instructions

Spelling strategies improve as development increases

- Sounding out is the most simple and most common strategy
- All words carry heavy phonological clues
- Using rules is a more sophisticated strategy
- Verbalizing a spelling rule leads to increase rate of development and accuracy
Implications for Instructions
Mapping Strategy Development to Spelling Development

- Sounding Out
- Rule Use
- Guessing
- Complete Retrieval
- Visual Checking
- Analogy
Implications for Instructions

Strong Support for Strategy Training

- The fundamental principles for word study
  - Follows the developmental phases of orthographic understanding
  - Focuses on spelling patterns
  - Focuses on effective spelling strategies
Benefits of Becoming Strategic

- Strategies help readers decipher unknown words
- Helps writers spell more difficult words
- Without a teacher or parent or tutor
- They become self-regulated!
Implications for Instructions

Systematic

- Spelling and reading taught systematically
  - Follows a prescribed sequence
  - Developmentally appropriate
  - Skill building
Implications for Instructions

Developmentally Driven

- **1st** letter sound matching
  - M = mmmm

- **2nd** blending and segmenting CVC words
  - /p/ /a/ /t/ = pat

- **3rd** rules that help determine vowel patterns
  - Silent e = tide
  - Adjacent vowel = boat
  - r-controlled = art

- **4th** rules for syllabication
  - 1 consonant following the first vowel must run = mo/tel
  - 2 consonants following the first vowel will split = cam/pus

- **5th** learning derivational roots
Implications for Instructions

Explicitly Taught

1. Pre-assess student’s ability
2. Clearly explain what students will learn
3. Tell students the benefits of using skill/strategy
4. Model how skill/strategy is used
5. Provide guided practice with feedback
6. Provide independent practice with feedback
7. Provide review
Implications for Instructions

Literacy-Rich Environment

Lots of real reading and writing!
Implications for Instructions

Automaticity

A good spelling and phonics program will provide a systematic approach that is both developmentally driven and strategic. This approach allows the quality of words to become engrained in memory so readers can become fast, accurate, and effortless decoders and spellers.
Caveat:
Spelling Harder than Reading

- Spelling requires our memories to reproduce words
- Reading requires our memory to recognize words
- Greek and Latin roots must be carefully learned to spell but not necessary for reading
- Often a good reader will also be a good speller but it is not always the case
Conclusion

Combine Spelling and Phonics Instruction

- Studying the correspondences between sounds and letters is the same for both spelling and reading.
  - As children study phonics rules they are also studying spelling rules.
  - Therefore, word study approach can incorporate both phonics and spelling.
  - There is no need to have separate class times for these.
Conclusion

Word Study

- Follow the developmental sequence
- Draw attention to letter/sound relationships
- Help see prevalent spelling patterns
- Provide simple phonics rules that generalize throughout multisyllabic words
- Follow-up with interesting reading and writing
Conclusion

We Have a Come A Long Way!

- Use to think of spelling as a memorization task
- Now we know that spelling ability follows a developmental path which gives insights on
  - what words to teach
  - what spelling patterns to teach
  - when to teach them
- The process is intricately related to reading
- Instruction is linked with phonemic awareness and phonics
Please e-mail all questions to
mail@readinghorizons.com  Thanks