Orthographic Mapping

Stages of Reading: Comparison of Theories

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Orthography

2 Greek Combining Forms

*orthos*
straight, right, correct

*graph*
written symbol
Literal Meaning = correct writing
Multiple Uses of Terms
orthography/orthographic
- Correct spelling of written words
- Writing system for a particular language
- Conventional spelling patterns (spelling rules)
- Awareness of common patterns in words that are consistent across words, but may not have 1-1 correspondence for letters to sounds (-igh, -ough, -alk)

Orthographic Mapping

The mental process we use to store words for immediate, effortless, retrieval. It requires phoneme proficiency and letter-sound proficiency, as well as the ability to unconsciously or consciously make connections between the oral sound in spoken words and the letters in written words. -Kilpatrick, 2016.

The process by which children move from decoding alphabetically to reading via the fluent recognition of individual words. -Castles, Nation 2006.
Visual Memory

- Do we recognize words because they are stored in visual memory?
- What about the student who learns new words, but forgets them after summer break?
- Researchers believe the answer to the first question is No.
- How do they know?

Research Evidence

- Studies with words in mixed case print
- Study 130 years ago - found word recognition is faster than visual recognition of objects
- Children with reading disabilities without other learning difficulties generally perform as well on visual memory tasks as good readers

- We often "block" forget names of familiar objects or names of people we know; we do not forget the printed words we know.

- We do not have enough visual memory storage to immediately retrieve 30,000 to 90,000 words
How does it work?
- Mental/oral “filing system”
  - Allows us to access words that have been stored
  - Words in this file must be meaningful
- Associate string of phonemes in word with letter order of word
- Words with meaningful relationship are anchored into permanent memory

The Brain and Orthographic Mapping

Occurs in the fusiform gyrus region

Orthographic Stage

Advanced stage of reading development
- Development beyond the alphabetic stage
- Involves having developed internal representations of words
- Recognize words quickly and accurately
- Automatic
- Happens unconsciously

At any particular point in time a child may be reading some words slowly with reliance on the alphabetic decoding while reading other words effortlessly.
Predictors of Skill

- Alphabetic and Phonological Skills
- Orthographic Processing Skills
- Print Exposure
- Semantic Knowledge

Skills Needed

- Phonological Awareness
- Letter-Sound Skills
- Word Study
Effective Instruction in Reading

Phonological Awareness

Letter-sound Correspondence

How to Teach

- Incorporate reading materials appropriate to the level at which the student can phonologically and orthographically deal with words.
- Teach phonological awareness sequentially alongside letter/sound correspondence instruction.
- Teach word structure sequentially.
- Incorporate "word families", "look-alike" words and nonsense words into reading lists.
- Read aloud to students.

Word Families

- Words to read focus on *rime units*
- *Rime Unit* = part of the syllable containing the vowel and consonant(s) following the vowel
- Only the first sound in each word changes
- Approach can be used with most syllable types
- Rime units should follow OG sequence
Developing Word Family Lessons

Letters/Sounds introduced:
- a, b, s, m, t, c

Indicates stopped initial sound; students beginning blending may have difficulty. Continuant sounds are easier.

Developing Word Family Lessons

Letters/Sounds and concepts introduced:
- Short and long vowels, digraphs, and consonants
  - New syllable type = Silent-e

Developing Word Family Lessons

Letters/Sounds and concepts introduced:
- Short and long vowels, digraphs, and consonants
  - New syllable type = Vowel R
Instructional Activities for Developing Orthographic Mapping

Phonological Awareness - oral only

On-set Rime practice with pictures and Elkonin boxes

- On-set Rime practice using lists of words presented orally
- Phonemic Chaining with colored chips representing sounds
Word Reading Activities

Phonemic Awareness - Using letter cards and word cards
  ➤ Blend sounds on slide

➤ Blending drill with letters, phono cards, or Flip Book

➤ Flip Book
Words/syllables to read on index cards
  ➤ Read words/syllables multiple times for fluency
  ➤ First reading is for decoding
  ➤ Incorporate activity for subsequent readings

Multisensory Activities for Multiple Readings of Words in Isolation
  ➤ Splat

➤ Read words/syllables on floor while stepping on them; Stepping Stones, Monster Feet, Hop Scotch
Tic-Tac-Toe

I Have... Do You Have?

Card Flip
- Place word cards on table face down.
- Student flips cards over one at a time and reads word.
Up and Down the Ladder

Twister Game

Roll the Dice
- Tape words to large foam dice or print words on dry erase cube.
- Student rolls dice and reads words.
Ball Toss

Word activities

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Connected Text

Provide phrases and sentences for students to read in addition to word lists
Link Words to Spelling

- Pair reading with spelling
- Student isolates sounds in words to spell
  - Finger tap to isolate sounds
  - Magnetic letters
  - Write words on paper
- Need connected text
  - Dictate phrases and sentences
  - Read back all spelling orally