Improving Spelling through Visual Memory

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Several years ago I had the opportunity to research and design a spelling series for Christian elementary schools. One of the profound findings in research is that the skills of spelling consist of about 40% phonics, 40% visual memory and 20% semantics, or meaning. In fact, most poor spellers over utilize phonics and “spell it like it sounds.” The skill that is missing is the one we employ when we’ve written something then said to ourselves, “That doesn’t look right.”

What we are actually doing is comparing our production to a mental image (MOI) of the word in our brains. This skill tells us if the i goes before e, whether the middle letter is doubled, if I need to drop the e after judge, etc. The process is related to visual memory—an essential process for school success.

Take for example, copying a teacher’s paragraph from the board. First, we must identify a sequence of letters or words, grasp them into visual memory, transfer our eyes to our paper, remember what to write, remember where to return on the board for the next segment, grasp it, transfer our eyes to the paper, remember where to place the next segment, and repeat the process until the task is finished. And you thought this was the easy, uncomplicated part of school!

Because visual memory is an essential component of spelling, I have worked with many parents to improve students’ spelling by working on the visual memory aspects of the process. Here are some of my suggestions to be freely shared with other parents.

1. Place the spelling words on flash cards.
   a) Select from the list of spelling words for the week, a high-frequency spelling list such as Dolch, or words the student frequently misspells in daily assignments.
   b) Use print for students through third grade, use cursive writing otherwise.
   c) Place 8 to 20 cards (depending on age) in a plastic bag; place bags in a kitchen drawer.

2. Mount a chalkboard (about 3 by 5 feet) on a wall in the kitchen.
   Answers to your questions:
   a) in the kitchen, because this is where you spend lots of usable time and the process is easier to manage; if the wall is not possible, use an easel
   b) a chalkboard, not a white board—it’s messier but it provides physical resistance which deepens the memory trace
   c) a large enough board to extend just above the head to the waist and about a half-foot beyond each shoulder of the student
   d) use two colors of chalk; a light one—white or yellow—and a dark one for corrections (Color enhances visual memory.)
3. Initiate the process. Plan to practice every day about 15-20 minutes or until you have exhausted the time you have available, or yourselves, whichever comes first. Here are the steps:

   1) Choose a card—any will do as long as it is a word the student needs to spell.

   2) Gain the student’s attention and hold the card before him about two seconds then lay it on the counter.
      • If the student hesitates, give him one more two-second view.
      • Do not make the word visible during the process. The goal is to challenge the youngster to visually grasp the information and hold it in memory while working, not to copy from the surface of the card.
      • If the student still doesn’t get it, ask what he remembers and review that information. Direct the student to look once more and focus on the part he couldn’t remember.
      • If he still doesn’t get it, that word is too difficult at this stage. Put that card away and choose an easier word.

   3) Send the student to the chalkboard to write the word. In the meantime, you can continue cooking or other kitchen chores, but don’t watch.
      • If the student hesitates again, let her return to you for one more two-second look.
      • If the student still cannot write most of the letters, just change to words with fewer letters until you see increased ability.

   4) When the student finishes writing the word, he should turn around and say “check time.” Don’t look or give any feedback. Hold up the card, now at a distance, again for two seconds, then place it face down.

   5) The student checks the word; proofreading is always her responsibility.
      • If it is correct and the student says, “Correct,” check it. Then direct him to erase the word and return to you for the next card to be flashed and the process to be repeated. (See notes later.)
      • If the student recognizes an error, give him the opportunity to correct it, then verify it as you hold up the card once more.
      • If the student says it is correct when it is really wrong, ask her to come and get the card. She then takes the card to the board and matches letter to letter to find the mistake.
• To correct the mistake, the student does not erase. Rather he takes a
dark color of chalk and marks over the letters that are incorrect. The
dark color and heavy mark-overs will create a stronger impression in
visual memory as to which parts of the word must be more carefully
remembered.

• After correction, the student says, “Check time.” If other corrections
are needed, direct him to proof the word again.

• When you are satisfied with the correction, indicate your approval and
direct the student to erase the board and return to you with the card.
Take the card, gain the student’s attention, and flash the card (yes, the
same one) for two seconds. Put the card down and send the student to
spell the word on the board.

• Repeat the process just as you did it the first time until the student has
success spelling the word and you are ready to go to the next word
drawn from the bag.

• Save the cards. After the student experiences some success,
incorporate the words into three or four phrases. Add these phrase
cards into your pack. This is the goal—to move from single words to
phrases, e.g., wanted to go, all the people, can’t go there, this huge
one, etc.

• Don’t use negative feedback. Just work the system. When you are
working at the right level, you will begin to see progress.

• Occasionally, you can add in other skills, such as:
  – reading the word
  – using the word in a spoken sentence
  – practice writing certain letters several times for correct formation
  – writing other words in the same pattern, e.g.,
    – take, make, bake, lake, rake
    – ring, rang, rung (but wrong)
    – mail, sail, tail, rail, nail
    – door, floor
    – should, would, could (If you can spell one, you can spell all.)
    – sorrow, borrow, tomorrow
  – writing other forms of the work, e.g., do, don’t; did, didn’t; child,
    children; stay, station; move, motion; thank, thankful,
    thankfulness; pose, position, compose, disposition.
  – writing the word in a sentence, either her own or one you dictate

• Provide and discuss visual cues for remembering how to spell more
difficult words. For example:
  – bird → bird (replace dot with bird shape)
  – stationary vs. stationery (attach to meaning)
    stay pen
- capitol vs. capital  
  dome (of the building)  
  all others  
- principle vs. principal  
  rule all others  
- reception → receive  
  deception → deceive  
  conception → conceive  

No need to remember i before e .... These are always a form of “cept,” a syllable that means “take in.”

4. Continue the process. Hopefully, you can have three to five sessions a week. Here are a few more suggestions to make the process more effective.

- Spelling aloud is almost a useless skill, especially if the manner of testing is in written form and we want transfer to daily writing. Therefore, all practice of spelling words should be in written form. Even in the car on the way to school, consider using a small chalkboard or “magic” slate for spelling practice.

- After a word has been correctly written on the board, help the student see the sound-letter relationships, how we can know its spelling from other words that are similar, its meaning, use, how it can be changed by adding prefixes and suffixes, etc.

- Writing dictated sentences with some of the words is an effective means of improving handwriting and spelling. Doing it on a chalkboard gets it up perpendicular to the eyes and uses large muscle masses. Both aid in developing better fine-muscle coordination and in enhancing memory.

- Play a variety of games that require visual imagery and memory.
  - puzzles  
  - Memory, Battleship, etc.
  - Use Memory cards, one set to each partner, with a visual block (screen) between them. One partner aligns four cards and then reveals them for two seconds. After the view is blocked, the partner matches the array. The screen is lifted to check accuracy and play continues.
  - Play the same game with colored blocks, shapes, numerals and letters.
  - Complete workshops for what’s missing, hidden pictures, finish the picture, mazes, codes and word searches.
  - Play Hangman, work crossword puzzles or Sudoku.

Generally, parents report good success following these suggestions as they see improvements in spelling, writing, and in other areas in which visual memory are essential—such as rapid word recognition in reading. I trust your student will experience similar success.
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