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ABSTRACT

A good spelling teacher teaches by "taste" rather than by "recipe": instead of strictly adhering to procedural outlines, good teachers alter their lessons according to students' needs. In addition, good teachers: (1) recognize the importance of visualization for spelling; (2) understand the two kinds of visualization--for memory, and for construction; (3) know how to develop a student's emotional resources and help the student maintain a positive attitude toward learning; and (4) are knowledgeable about the structure of subjective learning experiences and how these experiences are reflected in student physiology. (A sample spelling lesson and 14 references are appended.) (ARH)

Beyond Recipe: Leading Edges For Teaching Spelling

by

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Chris is 17 and can't spell. He can hold three letters in his short term visual memory, but no more. The teacher asks him to make the letters smaller so he can see more. He can't. The teacher asks him to make the viewing screen in his mind larger so he can see more. He can't. Puzzled, the teacher asks if he can let the letters run by like a ticker tape. He can! Four sessions later, Chris is spelling with ease, lists of 25 adult level words. Both the teacher and student are elated. To the student, it seems like magic, but to the teacher, it verifies what she knows about human learning.

In this article, we suggest that recipes for teaching such as direct instruction lesson design, formats for teaching inquiry, patterns for teaching the acquisition of skills are useful, but not enough. Exceptional teachers use these outlines **and** the subtle cues about the ongoing experiences of the learner as backdrops for the intricate moment-to-moment decisions they make when teaching.

In other words, exemplary teachers teach by taste rather than recipe. They constantly assess subtle cues from learners and ask themselves ongoing questions about what moves to make next to support learning. Like the sous chef who has intimate knowledge of the ingredients and how they best mix, the expert teacher knows about the intricacies of learning and how to make subtle yet elegant changes for each student to assure success.

What should a teacher know about learning if she wants to make a difference for a student like Chris? First, the teacher recognizes the importance of visualization for spelling and, incidentally, for other subjects like reading, writing and calculating. Of all the modalities, visualization is perhaps the most undervalued and underutilized in schools. One cannot but wonder when Einstein says, "I rarely think in words at all," if we are denying our students a way of thinking that is fundamental for survival and perhaps one key to Einstein's genius.

Second, the teacher understands that there are two kinds of knowing visually. (Dilts, et al, 1980) One is a memory function; the other is that of creation or construction. Humans utilize their visual memory to recall things. They often have vivid pictures and see all the parts of the image or they see events in sequence. To do this, the person must have had a past experience that can be "reviewed." In contrast, the other way of visually knowing is to create a new image, something not seen before such as a character in a story or an imaginary new gadget. This is the kind of thinking Einstein employed when he visualized himself on a beam of light observing and developing theories about the universe. The expert teacher knows that everyone has access to these ways of knowing. It is only the degree of detail and clarity that varies from individual to individual.

Third, the teacher knows that human learning also involves feelings. Teaching that does not take feelings into account can be clumsy and slow a person's learning. The expert teacher knows how to develop a student's emotional resources and help the student maintain a positive, open attitude towards learning.

Fourth, and finally, the teacher is knowledgeable about the structure of subjective learning experiences and how these experiences are reflected in student physiology. The remainder of this article will describe this in more detail.

> Chris's teacher taught by taste. She asked him questions to understand his experience of "seeing" internal images of the printed word. The reader will recall that Chris could only see three letters at a time. The teacher asked if size would make a difference. When it did not, she asked him to make an image with movement as a variable. This alteration made the difference in Chris' ability to "see" the word.

Chris's teacher asked questions to learn about his internal visual experience. Once she verified that he had conscious awareness of what he was seeing in his mind's eye, she had him experiment with the variables of that subjective visual experience. (See Figure 1 for ways teachers have students explore visual experiences.)

Chris's teacher knows that while the internal representations of experience are universal, no two humans ever combine them in quite the same way. Thus, she experiments by suggesting changes he can make with the visual image and checking to determine if these changes aid his accurate "seeing" of the word. Teachers find that students enjoy playing with mental images and that studying for a spelling test actually often becomes fun.

Using specific visual language to evaluate and verify the degree and type of visualization is just one way the teacher helped Chris. This teacher also made some assumptions by observing his eye movements and his posture. She suggested that he look up and to his left when making pictures in his mind. From watching Chris, she knew that this was what he normally did when making visually recalled pictures. Bandler and Grinder (1979) were the first to systematically observe that humans tend to look upwards when visualizing. This pattern, they discovered, was a universal human trait. (In cultures which place a high value on eye contact, visualization also occurs by looking straight ahead and defocusing.) Chris' teacher could tell when his visualization was a recalled or constructed experience based on the directions that his eyes moved. Right handed people tend to look up and to their own left to visually recall and up and to their own right to visually construct. This can be reversed in some left handed people.* A teacher who has this information and also knows that spelling requires accurate visual recall will suggest to a student that he visualize the words up and towards the left.

To test yourself, recall a picture of your signature in your mind's eye. What did you do with your eyes to visually recall an image? If you did not move your eyes, it was too easy. Try picturing a friend's signature. You may wish to have a friend observe your eyes for you, as it is difficult to self-evaluate fleeting eye movements. The teacher assesses his/her students by asking questions and determining where they look and then asking them questions to verify his/her hunches.

Chris' teacher also knows that posture mimics eye patterns. When visualizing, the entire body moves up and back. The head may tilt up and the shoulders back. This contrasts with a highly emotionally charged kinesthetic posture, like a fetal position, where the entire body is oriented

Bandler and Grinder discovered patterns for all modalities. If a person were thinking auditorily, he would look down and toward his non dominant hand. If he were accessing feelings or kinesthesia, he would look down and towards his dominant hand.)

towards the midline. Teachers who teach by taste have students visualize in the air before writing a word because they know that the normal writing posture (head down) can create interference in a student who has not developed a sophisticated visual memory. The teacher holds flash cards not just any place, but purposefully up and to the students' left to cause the students to access their own visual recall processes. The backside of the flash card creates a screen and assists the students in maintaining the visually revealed posturing. (In classrooms teachers sometimes create screens (places to visualize) by placing white paper on the walls.)

O.K.

> We hope you now have a sense for what we mean by "teaching by taste." The pot simmers. The cook smells -- more oregano; tastes -- perhaps some salt. The pot simmers. The cook mentally checks the recipe: Tomato paste? Yes. Chicken broth? Yes. And so on. The cook observes, swirls a wooden spoon -- checking consistency, smells again, tastes, adds a bit of this and that.

So, too, teachers watch the simmering pot, shelves of recipes at their disposal, the focus of their most critical senses on the processes of alchemy at work . . . learning. They test a bit, wait, and then make their moves guided by physiological cues about the students' subjective learning experiences.

Amazingly, a number of current procedures for teaching spelling actually interfere with learning to spell efficiently. Many have evolved historically. Some of us, for example, inferred from our own schooling that spelling was phonetic. If we had a problem with a word, we were told to "sound it out." Although some children show a preference for auditory learning, it is becoming more evident that good spellers are visualizers. When asked to spell a word, they can recall in picture form the morphological units of the word. Yet today many spelling programs ignore these research findings. One reasons for this may be that publishers are interested in maintaining the status quo in spelling, since in many systems this is the only curriculum area left in which all elementary students receive a new consumable book each year, which means continuing profits for book sellers.

Good spellers not only visualize but also have a very strong feeling about rightness and wrongness, to the point where they often become upset if something is spelled incorrectly. This visceral reaction is the second part of an efficient spelling strategy. Sometimes a good speller will write a word to check the visual configuration to see if it feels right.

A knowledgeable teacher hones this sense of perfection about spelling. She knows that poor spellers often appear to be lacksadaisical about misspelled words. It becomes a teacher's job to hone this sense of rightness and wrongness about misspellings. She knows that an emotional response is needed and that this emotional response has a corresponding visceral reaction in the slight tensing of the chest or abdominal muscles. This response can be trained. The teacher might also have the student use red ink in his mind's eye to correct misspellings to develop this sense of rightness and wrongness for consistently misspelled words.

Are there some good spelling recipes to offer a teaching-by-taste teacher? Sure! Here is one outline we've used when working with regular classroom teachers:

Step1. PREPARE

RAPPORT	Establish rapport, through appropriate positive interactions with students, helping them feel comfortable and providing fuller access to the learning and memory functions of their neocortex.
ANCHOR	Establish a signal which leads students to reexperience some prior success. For example, invite students to remember situations in which they have been confident or competent. As students actually re-experience and feel that confidence, they sit up straight in their chairs. This "anchor" may be set several times so that, when asked to sit up straight before some activity, the students will automatically feel more confidence. Anchoring is a way to reinduce resources within students to help them become more capable of learning. (See Dilts, et al, 1980, for more information on anchoring.)
GATHER INFOR-MATION	Observe students to establish a picture in your own mind's eye what they look like in this positive emotional state. Observe them as they access internal images, taking note of their posture and eye movements. Test their internal experiences by asking questions about their visual clarity. Learn the physiological cues for each student that indicate a prime learning state and the accessing of visually recalled information.

Step 2. INSTALL

DISPLAY	Write the word or portion of the word on a card using a colored pen. Hold the card up and to the students' left. Have the students trace the letters with their eyes and take a mental snapshot.
READ	Instruct students to practice reading off the letters from the picture in their mind's eye. Check accuracy by having students look at the word one more time and compare it to the one in their mind's eye. If the students have a strong visual image, they should be able to read the letters backwards. Spot check their visual (not auditory) processing by having students read the letters backwards or by asking questions about their visual experience.
MONITOR AND ADJUST	If a student reports an audio interference or you notice slight movements of the mouth, suggest that the student use the voice to say, "Make a good picture." If the picture quality is not clear, have the student adjust the picture by changing the variables listed in Figure 1.

Step 3. REVIEW

BACKTRACK	Go through cards learned in this session and review words learned in earlier sessions.

Step 4. CARRY OVER

STUDY Suggest to students that they practice the newly learned words, and then imagine themselves correctly writing the words during a spelling test. Just before bed is often a good time to do this.

TEST In the next session, test to determine how well the strategy has held.

While the above is an excellent recipe for teaching spelling, our point is that it alone is not enough for elegance in teaching spelling. The teacher who produces exceptional learning opportunities for all students carries the map or recipe in the back of her mind, but focuses primary attention on the cues coming from students. She asks questions of herself and develops alternative moves. For example:

> A student reported that, when trying to make the picture of the word roads in his mind, the "o" and the "a" wouldn't stand still; they kept jiggling so that he couldn't focus on them and hold them in his visual memory. In exploring this phenomenon, the teacher asked herself: "What is it that the student needs to be able to see the two letters?"
>
> The answer seemed to be that the student needed to be able to control his own visual experience. Since the teacher knew that whatever you resist persists, she decided not to try to get the student to hold the letters still, but instead offered the student a vehicle for having control over the movement, suggesting he place two playground slides in his picture and allow the letters to keep sliding on the slides. The student was able to do that and was thus able to hold that word in his visual memory.

It may be interesting to explore why the letters were jumping around, but it doesn't help us much to solve the problem. What does help is to figure out what needs to happen inside the student's mind to be able to make the picture vivid and clear.

We've noticed that teachers who have been able to help students in this way have a very strong understanding of their own visual capabilities. They can and do think about their own thinking processes. When they can't reference a personal experience to understand a student's visual difficulties, they playfully experiment, suggesting adjustments much as if the mind were a T.V. set with different channels and control mechanisms. The teacher who invited the student to incorporate a playground slide, or the teacher who suggested a ticker tape of letters, are examples of tailoring visual experience to meet the student's needs. Teachers with a strong understanding of their own visual capacity also understand that the specific words they use to have the student describe the experience makes a tremendous difference. Asking for colors, form, size, brightness all help students refine their visual powers.

Summary

We've been suggesting that we can, on the one hand, refine our recipes, remembering that they are not recipes to cook by, but are guides to apportioning and sequencing the ingredients. And, even with exceptionally good recipes, the best teaching is still by taste: monitoring subtle physiological cues that signal what's happening inside, envisioning results and being experimental in producing them. Bon appetit!

FIGURE 1

GUIDING STUDENTS TO GREATER SELF-CONTROL OF INTERNAL IMAGING

Brightness--	"Make the part of the word that isn't clear brighter." "Shine a flashlight on the letters that you forgot."
Size--	"Make those letters in the middle taller and bigger than the rest."
Color--	"Make a picture of the word using your favorite color." "Make those letters that you missed a bright green." "In your mind's eye, put a red X over the letters that are incorrect." "Close your eyes and see the word in pink."
Location--	"Make those letters fall out of the word and sit by themselves just below the word." "Stack those letters vertically right there in the middle of the word."
Distance--	"Make the word get real small and the letter 'S' get real big."
Clarity--	"Make the letters that you saw clearly get fuzzy and the ones you had trouble seeing get clearer."
Movement--	"Pull that letter out and let it dance around the word. When you get tired of playing, put it back in the word."
Print--	"Picture the word just like you saw it in the dictionary. Make sure the type face is the same."
Sparkle--	"Pretend the letter is a sparkler. As your eye follows the lines in the letter, little sparkles fly out."
Orientation--	"Look at the word and read the letters backwards."
Border--	"Put a white border around the word. Make it look like a photo in your scrapbook." "Frame it and find a place to hang it in this room (or your bedroom)."

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