

Examining the Personal-Association-Based Components of the Head-to-Toe Method of Associations for Vocabulary Acquisition

Part I: Sense-Based Associations

by Patrick T. Randolph and Nikoleta Dubjelová

University of Nebraska-Lincoln, USA
Masaryk University in Brno, Czech Republic



I. Introduction

“Though this be madness, yet there is method in’t.”

—Hamlet (Act 2, Scene 2)

The Personal-Association-Based Components of the Head-to-Toe Method may appear, at first blush, to be elements of laughable madness, much like how Polonius views Hamlet’s behavior; however, once the impact of these components comes to light, the reader will clearly see “there is method in it”—and an effective method that be! The Personal-Association Components contain four categories: (1) sense-based associations; (2) mind-body based associations; (3) people-based associations; and (4) nature-based associations. In this installment, I will first explain the inspiration behind the idea of associations, and then focus on the sense-based associations, paying specific attention to the relationship between color and vocabulary. Next, I will go over the procedure used to elicit color-associations, and then my co-author will offer three detailed examples from her experiences with lexical item-color associations. Her explanations will provide a clear insight into how she responds to and uses the colors as a vocabulary learner. We will, then, offer a word about other sense-associations and address two important caveats.

II. The Story Behind the Use of Associations



The use of associations in the Head-to-Toe Method initially came about by chance. In my own journey as a language learner, I associated colors with words and concepts, and this helped me a great deal with the various languages I have learned and with those I continue to study. I will never forget the time in Turkey when I asked my father-in-law (my wife is originally from Turkey) the word for “kind,” as in “various kinds” of blue hues of the sea. We happened to be driving down a winding country road that overlooked the Aegean coast. As he said the word, “çeşit,” I marveled at both the sound of the word and the sight of the various kinds of blues in the sea that we saw from the open window of the car. For me, from that day on, “çeşit” was associated with the color blue. I also recall my father-in-law’s voice: It was a happy one. He was excited that I was learning his language. The color, the sound of his voice, the movement of the car, the scenery, and the emotion of the moment are all associations that went into the encoding of the word, “çeşit.”

After using associations in my own language learning, I started to research work done in cognitive psychology and neuroscience that might support my own ideas. I was pleased to find that the whole notion of multisensory learning is a much supported and well-documented asset in the encoding and learning process. “The more elaborately we encode information at the moment of learning, the stronger the memory. When the initial encoding is more detailed, more multifaceted, and more imbued with emotion, we form a more robust memory” (Medina, 2014, p. 135). The idea of multisensory learning, or learning by association, makes sense as an effective learning tool, because the more senses that are involved, the more parts of the brain are involved in creating neural connections for long-term memory. There is support for this in Judy Willis’s (2006) research as well. She argues that “[t]he more regions of the brain that store data about a subject, the more interconnection there is. This redundancy means students will have more opportunities to pull up all those related bits of data from their multiple storage areas in response to a single cue” (p. 4).

Another major influence in my development of the different kinds of associations is a brain condition called *synesthesia*. For years, I could not understand why I would see red in extremely cold weather; that is, my field of vision would turn all red while I

experienced low temperatures. I later found out I have what is known as *synesthesia*. “Synesthesia is a hereditary condition in which a triggering stimulus evokes the automatic, involuntary, affect-laden, and conscious perception of a physical or conceptual property that differs from that of the trigger” (Cytowic & Eagleman, 2011, p. 112).

In layman’s terms, synesthesia is a criss-crossing of the senses, so a synesthete may “taste color” or “smell sounds.” A relatively common kind of synesthesia is grapheme-color synesthesia. This is where letters or numbers are associated with particular colors. For example, **As are red**, **Bs are blue**, and **Cs are green**. Vladimir Nabokov, the Russian novelist, had this kind of synesthesia. I have vision-temperature synesthesia; that is, I see particular colors based on the temperature. In fact, I’m known to one friend as “a human thermometer.” Franz Liszt and Ludwig van Beethoven had color-music synesthesia, meaning the musical notes all had colors for them. And James Wannerton, a famous synesthete, has lexical-gustatory synesthesia. When he hears the words “college,” “message,” or “village,” he tastes “sausage” in his mouth (Cytowic & Eagleman, 2011).

So, why is synesthesia such an important concept, and what good is it? Given that the synesthetic experiences are sense-based, automatic, and unite multiple experiences at once, it is a powerful example of multisensory learning. And, as a result, synesthetes are known to have very sharp memories (Cytowic & Eagleman, 2011; Medina, 2014; Ratey, 2002). Their brains maintain the pre-existing neural network while developing more neural connections due to all the various sensory-related experiences, and thus create strong faculties of recall.

With each of the above factors in mind, I created the sensory-based associations for the Head-to-Toe Method. These include color, smell, sound, taste, and touch associations. The intention is to take my students back to how they learned vocabulary in their first language by being conscious of as many sensory experiences as possible.

III. The Natural Attraction



Learning vocabulary is emotionally and neurologically a highly rewarding and exciting endeavor. In fact, a recent study concerning rewards in learning second language vocabulary found that lexical item acquisition elicits the same pleasure and reward responses as when one is receiving money, eating certain foods, or engaging in particular carnal activities (Ripolles et al., 2014).

In addition to the natural excitement of learning vocabulary, the sense-based associations inspire a certain kind of creativity mixed with intuitive responses. Why is this significant in the learning process? Mihaly Csikszentmihalyi (2013), one of the leading researchers on creativity, tells us that the process of becoming and being creative adds great meaning to our everyday lives. He explains that creativity has produced some of the most fascinating elements in our society, and when we are involved in creativity, we feel fulfilled, enriched, and complete. Moreover, he writes, “[c]reative persons differ from one another in a variety of ways, but in one respect they are unanimous: They all love what they do” (p. 107).

It is this response to pleasure and reward, the human desire to create, and the love for the creative process that I have tapped into with the use of sensory-based associations. In some cases, the student responses are intuitive reactions, and in other cases they are more creative. Either way, there is a love of what they are doing, and this makes all the difference in terms of creating and making word-sensory associations.

It should be noted that the students write the above information down on a worksheet that I give them in class. This allows them to record the components for each lexical item. Notice (see below) that I leave the definition blank because we formulate the definition together as a class. I usually offer one to two example sentences about the lexical item, and later I give more if necessary. After we complete these components, the students are given time to offer their own examples to the class. Below is an sample of the setup for the idiom “have a soft spot for.”

have a soft spot for

Example sentence: *Nikoleta **has a soft spot for** the Czech language; she considers it music to her ears.*

Definition: _____

Verbpathy: + / -

Color: _____

V. Student Experiences with Color Associations



My co-author, who has studied a vast variety of lexical items using this method, will now detail some of the color associations and their consequences that she experienced and continues to experience with the method.

have a soft spot for

The color association idea sounds very basic; and I was wondering while first learning the method, how something so simple could be of any help. I soon learned, however, that something so simple and natural as color associations not only open windows for vocabulary acquisition, but they also prompt associations with other imaginable sensory experiences. Some term-color associations are easier and more straightforward than others. Let me begin with a really beautiful idiom, “have a soft spot

for.” This is an easy one to match colors to, and for me this process is very intuitive. In fact, this idiom and its color association almost screamed out at me in terms of connecting the emotions and individual personal associations. For this idiom, I immediately saw the color of “red wine.” I personally find this particular color beautiful, noticeable, very sensual, and even mystical. Also, it reminds me of home—Malý Slavkov, Slovakia. I have this huge cup at home with the same color — “red wine.” It’s just mine—nobody else uses it. I only put coffee in it, and I always go outside on our terrace to drink coffee from the cup and cuddle with my German Shepherd, Nell. And these are two things I definitely have “a soft spot for;” that is, my coffee cup and my dog’s soft fur. This idiom also reminds me of the Czech Republic—specifically, the Czech language. I could listen to that language all day and all night—it’s so incredibly sweet and beautiful, especially when it’s spoken by men. With each one of these sensory associations comes one common and strong emotion—excitement. I think it’s important to create a memory in your mind related to the term so that you can actually “feel” emotions associated with it. For me, that is the crucial point— when a term becomes “real,” and when it starts to mean something on a personal level.

be up in the air

The next term I would like to discuss is also an idiom, “be up in the air.” At first blush, this term sounded to me like something very positive. When I was asked to think about the color associated with it, I immediately saw “red”—probably because I misunderstood the correct meaning in the beginning. I thought it meant one thing when it meant another—“not having a fixed plan.” Red seemed to be a “flag” warning me I was wrong in my initial understanding. The color is counterintuitive when compared to “air,” but that helps me remember the real meaning of the idiom, which is also very counterintuitive for me. With this confusion also comes the feeling of uncertainty, which for me goes hand in hand with the smell of cooked broccoli. I am never sure how that food can taste good, even though it does. In my opinion, this is a great example of remembering a term based on the process of learning with associations. It shows that the connection is very powerful as long as it is personal. That is why it is important to discuss different personal associations in a class out loud, and also hear others’ thoughts and ideas. It all helps students learn, remember, and recall the words.

talk someone out of something

The last lexical item I want to touch on is the idiom, “talk someone out of something.” When I heard this for a first time, an image immediately popped into my head. I saw the color “black” because this idiom reminds me of a girl I know. She has dark black hair and eyes that are almost “black” as well. In addition, she usually wears dark clothes. She always tries to “talk me out of some enjoyable free time activity.” If I want to go out with friends, she says that I should study instead. If I want to go to the cinema, she tells me I should go to a cultural museum. If I want to read a novel, she suggests that

I could read an academic article and learn something new. This might sound like she is just a “good friend” who wants to push me towards some goal or achievement, but for me it is just overwhelming. When I think about her, I always smell cigarettes, and I feel anger. She always makes me feel like I am not doing enough with my life. This association is extremely strong. In fact, I never had to review this term after initially learning it in class—it was there from the beginning and has been there ever since.

There are several ways one can approach this activity of lexical item-color associations. The method we use in class focuses on the students’ intuitive responses and their creativity. From my point of view, it is an incredibly fun and efficient way of learning vocabulary. Once I personalize terms with colors and the other associations, I am able to start using them very effectively and frequently. I do not even have to study or review them. When I want to use the terms for other writing projects, I just look through my personal associations and replay the colors, sensations, and short stories behind each of the terms. I do not need to review the definitions—the method is that powerful.

Benefits

Eagleman (2015), in his book, *The Brain: The Story of You*, shows the power of associations and the influence of the individual self in perceiving the world and in the learning process. According to Eagleman, neuroscience studies demonstrate that “the meaning of something to you is all about your webs of associations, based on the whole history of your life experiences... You don’t perceive objects as they are. You perceive them as you are” (p. 33). This nicely highlights the profound implications of using the associations in the method, and also shows just how complex even one association component can be. For although we start with color, this can initiate a whole set of other associations like emotions, memories, or other senses as described by my co-author in her vividly detailed associations of “have a soft spot for,” “be up in the air, and “talk someone out of something.”

The Other Senses

The above focuses on color associations; however, we can also ask students to find and think about smell, taste, sound, and touch. Of these, the senses that the students claim are most helpful are smell and taste. Perhaps it is because they intuitively understand that these two senses are intimately connected to memory. Moreover, not only are smell and taste related to our memory system, but they also help in encoding and learning (Horstman, 2009). I usually use the smell association as a “review component” and ask the students to associate the terms we studied during the week with the smells of their choosing. It is important that the students give detailed smell descriptions like “sour lemon” or “lilacs in the rain” versus a general smell category like

“sour” or “sweet,” as the brain and memory system will robustly react to the former but not the latter (Cytowic & Eagleman, 2011). This sense could, of course, be added at the start along with the color associations. The use of the senses is entirely flexible, and an instructor can decide what is best for their own class based on his or her students and their preferences.

VI. Caveats



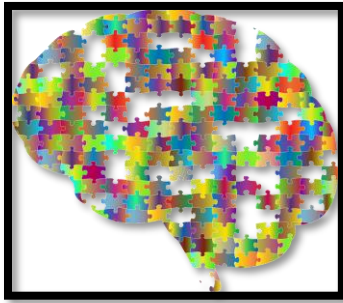
Before concluding, we would like our readers to consider two significant caveats. First, we have found it is important to give the students a few moments to respond to the lexical item-color association and let it develop in their mind’s eye. As the instructor, I used to ask the students to make a lexical item-color association and share it with the class. However, the co-author of this article, Dubjelová, pointed out that this quick pacing can sometimes interfere with each student’s response. That is, if too many oral responses are given, a certain number of students might not be able to create their own, unique lexical item-color association. So, we discussed this point and found it best to allow a few seconds for the students to let the associations develop before orally reporting them to the class. By doing this, each student has a better chance to associate a particular color in his or her mind before sharing it with classmates.

It is also important to keep in mind that, depending on the term, there will be more or less variety in the student responses. For example, an idiom like “shed light on” will most probably generate colors like “yellow” or “red” as above. However, a term like “come up with” might produce a myriad of colors—from “sparkling blue” and “green” to “yellow” and “black and white.”

The second major factor that will most assuredly help is to simply ask why the students chose the color that they did. In some cases, they may answer, “I just saw blue, there is no reason.” But perhaps the more they think about it on their own, they will create more associations and connections. For those who do give reasons, their responses will prove to be invaluable. First, they will likely inspire others to do the same with another term; and second, they will model just how easy it is to connect one association with another. Soon, they will have touched on other senses and even emotions and memories

as is apparent in the co-author's explanation of "have a soft spot for," "be up in the air, and "talk someone out of something." The entire class will benefit and see how the spider web effect of associations help students learn, remember, and use the lexical items being studied.

VII. Concluding Remarks



If we ask our readers, "What color do you see when you think about this article?" we may receive a number of intriguing responses. As we have seen, the effective nature of this component lies in how it combines vocabulary definitions with colors and the additional associations like emotions, sensory experiences, personal memories, and vivid images of people, animals, languages, and places. These associations tap into each student's personal history and personhood by connecting the terms and colors to their intricate web of associations. The lexical items consequently become very intimate creatures in the students' minds and psyches, and the terms are easily learned and recalled. And ultimately, the multisensory learning experience brings a sense of charm and intrigue to the classroom, and it helps the students learn vocabulary in a similar way as they acquired their first language—with an authentic understanding of lexical terms through feeling, ownership, and excitement.

References

- Csikszentmihalyi, M. (2013) *Creativity: the psychology of discovery and invention*. New York, NY: Harper Perennial-Modern Classics.
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behaviour*, 11, 671–684.
- Cytowic, R. E., & Eagleman, D. M. (2011). *Wednesday is indigo blue*. Cambridge, MA: The MIT Press.
- Eagleman, D. M. (2015). *The brain: The story of you*. New York, NY: Pantheon Books.
- Horstman, J. (2009). *The Scientific American: Day in the life of your brain*. San Francisco, CA: Jossey-Bass.

Medina, J. (2014). *Brain rules: 12 principles for surviving and thriving at work, home, and school*. Seattle, WA: Pear Press.

Ratey, J. J. (2002). *A user's guide to the brain: Perception, attention, and the four theaters of the brain*. New York: Pantheon Books.

Ripolles, P., Marco-Pallares, J., Hielscher, V., Mestres-Misse, A., Tempelmann, C., Heinze, H.J., Rodriguez-Fornells, A., & Noesselt, T. (2014). The role of reward in word learning and its implications for language acquisition. *Current biology*, (24)21, 2606-2611.

Willis, J. (2006). *Research-based strategies to ignite student learning: Insights from a neurologist and classroom teacher*. Alexandria, VA: Association for Supervision and Curriculum Development.

PATRICK T. RANDOLPH has received two “Best of TESOL Affiliates” awards for his presentations on his own contributions to vocabulary pedagogy (2015) and his seminar on preventing plagiarism (2018). He has also recently received two “Best of CoTESOL Awards” for his 2017 presentation on Observation Journals and his 2018 talk on Creative Writing. He teaches in PIESL at the University of Nebraska-Lincoln and specializes in vocabulary acquisition, creative and academic writing, speech, and debate. He has created a number of brain-based learning activities for the language skills that he teaches, and he continues to research current topics in neuroscience, especially studies related to exercise and learning, memory, and mirror neurons. Randolph has also been involved as a volunteer with brain-imaging experiments at the University of Wisconsin-Madison. He lives with his wife, Gamze; daughter, Aylene; and cat, Gable, in Lincoln, NE.

NIKOLETA DUBJELOVÁ is currently an exchange student at the University of Nebraska- Lincoln. In her home university, Masaryk University in Brno, Czech Republic, she is a graduate student majoring in Applied and Environmental Geology. With her enthusiastic interest in paleontology, she has taken part in several excavations in Slovakia and the Czech Republic. She currently volunteers in the paleontological laboratory of Morrill Hall on the University of Nebraska-Lincoln campus. Her main interest within paleontology is geometric morphometrics, a methodology she used in her bachelor's thesis and will continue to use for her master's thesis. Besides her academic interests, she loves hiking, especially with her German Shepherd, Nell, reading, writing, and driving while listening to an eclectic blend of music. And, she always enjoys a good cup of coffee!

Correspondence concerning this article can be addressed to patrickrandolph@gmail.com and nikadubjelova@gmail.com.

Art sources: All images are from www.pixabay.com.



Copyright © 2019 Language Arts Press
www.LanguageArtsPress.com