

Sit & Get Won't Grow Dendrites: Professional Learning Strategies That Engage the Adult Brain

by Marcia L. Tate, Ph.D.

Visualize the worst presentation or training session that you ever attended. The chances are that you were talked at by a presenter who was either boring or argumentative. I would bet that you actually moved very little and maybe not even at all unless there was a break or lunchtime. Then attempt to recall what you learned in the session. The learning curve was probably directly proportional to the degree of active engagement you experienced. In fact, there is a saying that is as follows: As the bottom gets number, the brain gets dumber!

In the best-seller, *Sit & Get Won't Grow Dendrites: 20 Professional Learning Strategies that Engage the Adult Brain*, I describe the worst presentation that I ever attended. It was conducted by a gentleman who had limited knowledge of the subject matter or adult learning theory. He ran in at the last minute, after the participants were seated, slapped several transparencies on the overhead (which were typed in single space text), and expected us to read them ourselves. Since we were unable to accomplish this impossible task, he read them aloud to us for well over an hour. Although I will always remember the experience (since it taught me what not to do as a presenter), I never did understand or remember the content presented.

Brain research and learning style theory relate that there are twenty strategies that all trainers should use when presenting to adult audiences. These same strategies facilitate comprehension and retention of content since they take advantage of the way all brains learn best and therefore, should also be used with students. In fact, these methods of delivery cause dendrites, or memory cells, to grow in the brain. They also address all four learning modalities: visual, auditory, kinesthetic, and tactile. This article will delineate all twenty of the strategies and provide some authentic reasons as to why they should be used to make your presentations unforgettable.

1. Brainstorming and Discussion (Verbal- linguistic, Auditory)

The neuroscientists are telling us that the person in a training session who is doing the most talking is growing the most brain cells. In the majority of sessions I have experienced, that person is the presenter. It shouldn't be! Participants must be provided with ample opportunity to brainstorm ideas without fear of reprisal and to debate controversial issues. One person's idea actually causes another person to search their brains for other related ideas (Gregory & Chapman 2002).

2. Drawing and Artwork (Spatial, Kinesthetic- tactile)

How many times have I heard adults make the statement, I can't draw! This is probably because they haven't had the opportunity to draw anything since they were in the primary grades. Yet the amygdala (the seat of emotion in the brain) and the thalamus (the receptor for information from the five senses) are both activated when people are drawing (Jensen 2001). Have your adult learners draw during training to facilitate retention of information.

3. Field Trips (Naturalist-tactile, Kinesthetic)

Try taking your adult audiences on field trips where they can experience real world learning since a great deal of information stored in the brain comes from concrete experiences (Westwater & Wolfe 2000). In fact, two of the world's greatest teachers, Aristotle and Socrates, instructed through the use of field trips.

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4. Games (Interpersonal, Kinesthetic-tactile)

Individuals are motivated by the need for fun (Glasser 1990). Using games, even in a classroom of adult learners is extremely motivating. Review content through a good game of Jeopardy! Toss a ball randomly so that participants can provide answers to designated questions. Watch the energy level in your training soar!

5. Graphic Organizers, Semantic Maps, and Word Webs (Logical, Visual-tactile)

I never teach anything complicated or confusing without the use of a graphic organizer. Graphic organizers work because they visually represent linear ideas and are beneficial to both left and right hemispheres of the brain (Tate 2003). Also referred to as thinking, mind, concept, or semantic maps or even word webs, they provide connections between bits of information and make the learning easier to understand and remember.

6. Humor (Verbal-linguistic, Auditory)

Opening your training session with a joke relaxes you and also enlivens your participants, reduces their stress, and improves their creativity (Feigelson 1998). In fact, humor and laughter are so good for the brain and body that major comedians live five to twenty years longer than the average human.

7. Manipulatives (Logical-mathematical, Tactile)

The connections between the brain and the hands are so complicated that no single theory can explain it (Jensen 2001). When participants in your training sessions are manipulating cards or even building models, they are using their spatial intelligence and reinforcing content.

8. Metaphors, Analogies, and Similes (Spatial, Visual, Auditory)

Finish these sentences. Like sands through the hourglass, _____ (so are the days of our lives). Like a good neighbor, _____ (State Farm is there). When trainers connect two dissimilar items together through the use of a metaphor, analogy, or simile, the brain has a hook or connection for remembering the new information.

9. Mnemonic Devices (Musical-rhythmic, Visual, Auditory)

I refer to mnemonic devices as brain short-cuts since they are connected ways for the brain to remember a term or a list of items. Health officials know that the public will never remember Acquired Immune Deficiency Syndrome so they just call it AIDS. Try having your participants create their own mnemonic devices for something you want them to remember.

10. Movement (Bodily-kinesthetic, Kinesthetic)

One of the strongest memory systems in the brain is procedural memory, which involves the use of the body in learning. Things that you learned while your body was moving are long remembered, e.g., driving a car or riding a bike. When participants are moving around the room to meet with a date and discuss your content, they are strengthening their memory for the information.

11. Music, Rhythm, Rhyme, and Rap (Music-rhythmic, Auditory)

Finish this phrase, Conjunction Junction, _____. If you said 'what's your function?' you already know the memory value of music. Allow participants to work in groups or individually to write songs, rhymes, or raps as they reconstruct knowledge learned in your training session and they will thank you.

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12. Project-Based and Problem-Based Instruction (Logical-mathematical, Visual, Tactile)

Adult learners who have no projects to apply or problems to solve in the real world, following a training session, are adults who often leave their learning in the workshop. After all, brains grow better in the real world than in an artificial place called school (Westwater & Wolfe 2000).

Always give your participants a project to implement that will help them apply what you taught them in their real world.

13. Reciprocal Teaching, Cooperative Learning, and Peer Coaching (Verbal, Visual, Auditory)

Have participants complete an activity or make a list of items individually. Then have them work with a partner or in a group to improve their performance or to add to their list of items.

Invariably, the group's performance will always be superior to any individual performance in the class, thereby, proving that two heads are better than one. Having participants coach one another while applying new skills or learning new content is invaluable for providing ongoing support.

14. Role Plays, Drama, Pantomimes, and Charades (Body-kinesthetic)

A heated game of Charades is still a favorite pastime for an adult party. Having your participants act out a particular concept, or role play how they would solve a certain problem creates concrete memories in the brains of your adult learners. This strategy places the learning closer to the real world, the reason the brain exists in the first place.

15. Storytelling (Verbal-linguistic, Auditory)

Watch a speaker or a minister begin to tell a story and notice that everyone is listening. This is because stories provide a script for people to link information to in their memories (Markowitz & Jensen 1999). Begin and end your training session with a true story and capture the attention of all learners, especially if the story is emotional.

16. Technology (Spatial, Visual, Tactile)

Technological advances have revolutionized every aspect of our lives including how teachers teach and how people learn. Provide experiences that equip participants with the ability to utilize the technology to the fullest extent, including e-mailing a pen pal in another country or researching on the Internet for a project.

****A word of caution, some teachers utilize technology as their sole source of lesson delivery.**

Don't forget the importance of movement and role play for strengthening procedural memory and developing a healthier, more active student.

17. Visualization and Guided Imagery (Spatial, Visual)

Everything happens twice, once in the mind and once in reality (Covey 1996). Even the magnificent Blue Angels Fighter Squadron sits in a room and visualizes its routine prior to getting into the airplanes. Try having participants visualize what they wish to accomplish and then stand back and watch them accomplish it.

18. Visuals (Spatial, Visual)

When they say a picture is worth a thousand words, they are not kidding. Showing the brains of your learners what you are teaching is far more memorable than telling them about it. Use charts, graphs, videos, PowerPoint®, overheads, and other visuals to make the learning come alive. Be careful not to overdue your PowerPoint® with too many slides and a lack of active engagement in between. I have seen audiences disengage when this was the only method of delivery.

Adult learners who have no projects to apply or problems to solve in the real world, following a training session, are adults who often leave their learning in the workshop. After all, brains grow better in the real world than in an artificial place called school (Westwater & Wolfe 2000). Always give your participants a project to implement that will help them apply what you taught them in their real world.

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19. Work Study and Action Research (Interpersonal, Visual-tactile)

People learn to do a job by doing the job. That is why internships, practicum, and apprenticeships are invaluable for acquiring on-the-job training. Providing participants with opportunities to try out hypotheses in the name of action research ensures practical application of new content. After all, people create new and very strong neural networks from actual experience, not artificial paper and pencil tasks (Westwater & Wolfe 2000).

20. Writing (Intrapersonal, Visual-tactile)

When I teach, I provide participants with only a framework or outline of the content on the handouts. Why? Because we create the handouts as we learn. Having participants write in short chunks of information increases memory. Have you ever written a list of groceries only to leave the list at home? Isn't it funny that you are still able to recall many of the items on your list when you got in the store simply because you wrote the items down ahead of time?

Summary

Now that you know the twenty ways you can teach anyone anything, there is no excuse ever for conducting a boring and meaningless training session. My texts, *Worksheets Don't Grow Dendrites: 20 Instructional Strategies that Engage the Brain* (2003) and *Sit & Get Won't Grow Dendrites: 20 Professional Learning Strategies that Engage the Adult Brain* (2004) together provide more than four hundred pieces of research and three hundred brain-compatible teaching activities for both student and adult learners. When I teach young and old alike, I plan my content around the aforementioned twenty strategies and receive rave reviews. More importantly, I also produce learners who understand and retain the content and have fun while doing it. Why would you want to teach any other way? To do so would be professional malpractice.

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