Making Memories: The Role of the Brain in Learning
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No matter what you say or do, it makes no difference if your participants cannot remember, recall and act on the information later. To that end, you should strive to aid learner memory throughout your training in order to enhance learning and increase the potential that they will have a meaningful presentation experience.

Learning and memory are closely related and the terms are often interrelated. Learning refers to the acquisition and encoding of information while memory relates to the storage and retrieval of that information.

The ability to accurately recall information is often envied by others. One story tells of how the ancient Greeks revered people with powerful memories to the point that worked very hard to devise techniques for enhancing memory. They created a series of mnemonics (pronounced neh-mon-icks) or memory tools to assist in recalling information. Some of these tools are still used today. Still, all the tools in the world will not help participants to retain information if you fail to remember that for most adults, information received must be:

- ***Meaningful*** and something they perceive as valuable or useful. When presenting such information it is helpful to put it into a format or structure that aids in retention and allows participants to connect it to previously received information. The use of analogies and metaphors can assist in this effort, as can short interim reviews done periodically.

- ***Given individually*** or one item at a time with no other distractions being offered at the time. For example, if you are presenting a key point for discussion on a flip chart or dry erase board, turn off your PowerPoint or overhead projector images.

- ***Presented effectively*** and in a manner that allows time for participants to focus on and grasp the concepts. They should have ample time to process what was received and then be able to take notes or ask questions as they feel necessary. Slowing your rate of speech and reducing the numbers of points presented in a session can assist in accomplishing this.

- ***Reviewed*** and tied to previously learned concepts every 15-20 minutes in order to cement them into memory and enhance understanding of the overall scheme of the concept or material.

Like other brain-based research, the study of memory has led to some significant advances into understanding how the human mind works. Primarily, scientists have discovered that memory is not a single function structure, nor does it occur in only one area of the brain. Instead, memory is a dynamic process that reconstructs various pieces of information stored in different areas of the brain each time someone encounters new items then, attempts to make sense of the material.
One key finding that you can immediately apply in your training programs is that pictures are more impactful to memory than mere words. According to information in the book, *How People Learn: Brain, Mind, Experience, & School* by National Academy Press, this superiority of images over written or spoken words is true even when pictures and words are combined.

There are a couple of important implications of memory research. First, participants will often recall words or information that is implied rather than actually presented. For example, in referring to a brain-based training environment, if you were to give a series of terms such as, fun, excitement, music, color, table glitter, toys, and props then later ask someone to describe the environment of a brain-based program, they might likely include the term "party atmosphere." This is because the brain is an active unit that continually stores and recalls information and material. It may well associate the items you listed with a festive or party scenario. New external input is often intermingled with existing memories that are similar. The result is often incorrect memory recall. This phenomenon often occurs at crime or accident scenes, which is why law enforcement officers interview all available witnesses in order to identify common story elements. This collective memory can help them get a more realistic picture of what actually happened.

Due to the mental distortion that can occur during training, it is important that you deliver material to as many senses (e.g. seeing, hearing, tasting, touching, and smelling) as possible. Additionally, you should periodically clarify and verify understanding, then review material every 15-20 minutes to help solidify concepts in the mind of your attendees.

The second implication of memory research is that participants benefit more when related events or items are grouped or placed in logical sequence. For example, step 1, 2, and 3 versus, step 3, 1, and 2. This is important because when unsequenced information is delivered, the brain pauses and attempts to categorize or associate what is received in order to facilitate recall. When you present an item or make a point that relates to something presented much earlier in the program and is not associated with your current sequence of material, you can actually cause confusion. This is because distracted attendees will attempt to internally sequence and compare items in their mind in order to make sense of them.

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