

Create the Right Environment for Learning

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Brain researchers have found that many things stimulate learner's brains during training and educational events. Key among these is the environment in which learning is to take place. If you want your learners to achieve maximum learning potential, create a learning environment in which you ensure that everything that they will encounter from the time they enter until the time they leave is focused on accomplishment of your learning objectives. This includes the following:

- **_Organize furnishings and training aids** in a manner that is learner-centered. This includes setting up desks and chairs to allow clear visibility of learning aids from anywhere in the room, maximum interaction between you and learners and amongst themselves, and access and mobility for people of all ability levels.
- **_Introduce colors into the environment** through use of residual materials on walls (e.g. posters, pictures, charts, drawings, or other similar items), wall color, and handouts, since researchers have found that color stimulates the brain.
- **_Use effective illumination** that does not cause eye strain, eliminates shadows from writing and viewing surfaces, reduces glare on visual aids screens and monitors, and avoids flickering (e.g. fluorescent lighting). All of these can cause distraction and learning breakdown. The ideal situation is to try to mirror natural lighting as much as possible and to even incorporate natural light to help energize participants and stimulate the brains of learners.
- **_Provide nourishment and hydration** by providing healthy alternatives to the standard "continental breakfast" consisting of sugared pastries and coffee only. Provide fresh fruits and fruit juices, bagels, muffins, caffeinated and decaffeinated coffee and tea, and plenty of fresh water. For snacks, avoid greasy chips and sweet cookies or pastries only. Offer alternatives like pop corn or pretzels along with some fresh fruit. Also provide fruit juice drinks, along with any coffees/teas and sodas you offer, as well as plenty of water. If you are serving a lunch consider what you will provide. It is best to avoid heavy pastas and meals. If providing sandwich meat or a sit down luncheon, avoid turkey which has a natural enzyme called l-tryptophan that induces doziness. In case you ever had the desire to take a nap after Thanksgiving meals, now you know why!
- **_Monitor the room temperature** to ensure that the room is not too hot or cold. Keep in mind that you are likely active and moving around so learners may feel cold more than you do.

According to various research studies, the optimal temperature for a learning environment ranges between 68-72 degrees Fahrenheit or 20-22 degrees Celsius. However, since people have different levels of tolerance, it is a good idea to suggest that participants dress in layers or bring a coat or sweater with

them to your programs or class. This allows them to address personal comfort needs. If possible, use a training site where you have control of temperature settings. This is important because being in a room that is either too hot or cold can dramatically affect learner concentration and ultimately negatively impact learning. If you must decide between having the room warmer or cooler, choose cooler. This is especially important following a meal when people normally become sluggish. If the room is warmer and you have no control, make sure that there are plenty of breaks and activities as well as liquid refreshments for participants.

- **Plan acoustics and control sounds and noises** since everyone needs to hear what is said in the room to facilitate their learning. Check your audio-visual sound levels from various points in the room before learners arrive to ensure that they can be heard. Additionally make a statement before beginning that if anyone has difficulty hearing they should let you know so that you can adjust the sound or ask others to speak up.

It is also important to monitor outside noise. When planning a session or class, try to locate a room that is away from large gatherings, planned construction or maintenance work or foot and vehicular traffic, if possible. Additionally, check the room in advance to make sure there are no humming fluorescent lights, that the projector is not buzzing or rattling, and that no distracting noise is present.

Participants also contribute to noise levels by using cell phones and beepers and by having side conversations or talking in loud voices during small group activities. This type of noise can actually cue you that learners have completed a small group task. That is because when participants finish discussing an assigned topic, they will typically begin networking, laughing and doing other things that cause the noise level to escalate.

At any rate, all distracting noise should be controlled or eliminated to the best of your ability in order to enhance the learning experience.

- **Incorporate vegetation into the room** since green, non-flowering plants are a filter for carbon dioxide and introduce fresh oxygen into the air. Plants have been found to be another simple, yet effective, way to offset some of the pollution that exists in offices and training rooms. In research for the National Aeronautics and Space Administration (NASA), Dr. B. C. Wolverton conducted studies using plants to remove pollutants in controlled, closed environments. He and others have found that, "a number of common house plants successfully remove contaminants. The study concluded that placing plants within an individual's breathing zone (approximately 6-8 cubic feet surrounding the person) improves air quality. It is recommended that 2-8 small or 2 large plants be placed every nine square meters (900 square feet)."

- **_Use smells and odors that stimulate.** For years, researchers have been exploring the impact of smells on learning and memory. In studies, the odors of pine, peppermint, osmanthus, violet leaf, floral, and orange citrus have been found to impact the brain and positively impact learning and recall.

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