

6 More Strategies for *Keeping Attention*

Clearly, It's Behind Me

Explanation and Research

We have a limited capacity for consciously processing incoming visual information (Desimone, 1995), and our capacity for processing competing visual stimuli is limited (Kastner, et al, 1998). At any given time, only a small amount of information on the retina can be consciously processed. This means that giving attention to one visual target leaves less available for other visual stimuli .

One thing that could help would your students focus on you as you teach, is for you to verbally bring attention to what you want your students to focus on (i.e. “Ok students, pay close attention to this, it’s important”). A more elegant solution is to reduce the amount of competing visual stimuli behind you.

Here's how you do it

1. Don't teach in front of a busy bulletin board, with a movie or slide behind you, or lots of posters. The most recommended way would be to have a blank wall behind you when teaching.

Misdirection

Explanation and Research

You need to be aware of what you are communicating non-verbally with your expressions, gestures, posture and actions. For example, I have seen teachers introducing a student who is about to do a presentation. As they leave the front of the room after introducing the student, I have observed teachers look at the clock or glance at their watch, wave to people out in the hallway, or actually start shuffling through the sheaf of papers they were holding in their hands. This lack of attention can lead to a noisy class of students not paying attention during the presentation. The teacher has non-verbally communicated to the class exactly how much attention to pay the speaker at the front of the room.

The research for this skill has its roots in how magic tricks are performed. Many magic tricks work because of a skill magicians have perfected over the centuries called misdirection. Misdirection is the act of manipulating attention. In one recent study, researchers recorded the eye movements of subjects as they watched a magician perform a vanishing trick. Common sense would predict that the participants would be watching the trick as it was performed, right? Surprise! Participants spent much of their time looking at the magicians face and looking where the magician was looking, not the actual trick! This research shows the power of social cues. Certain social cues, such as where the magician is looking while performing a trick, are particularly important for directing attention (Kuhn and Tattler 2005; Tattler and Kuhn, 2007). As teachers, we can take advantage of this by incorporating the Skill 2.7 Misdirection, into our practice.

Here's how you do it

1. **Introducing a speaker:**

After you introduce the speaker, you should walk toward the side of the room. While walking, you should keep your eyes on the speaker, even if this means walking backwards for a little bit. If a student happens to look at you, they will look where you are looking, and follow the gaze back up to where it is supposed to be, the speaker at the front of the room.

1. **Looking at the board**

Misdirection can also be used to help students pay attention to the information on the board. Imagine you tell your students: "Ok students, look at the board" but while you are saying this, you are looking right at the students. The natural tendency for the students is to look where you are looking. If you are not looking at the board, the students will not be looking at the board. I have actually observed this scene played out where the teacher begins to get angry because the students are not looking at the board, but at him. The simple solution to this dilemma is misdirection. As you ask the student to look at the board, you gesture with your hand toward the board, and looks at the board while you begin speaking. The students will automatically, naturally, look at the board with you.

No Compete Clause

Explanation and Research

Auditory

You should avoid competing auditory stimuli in the classroom. You should pause the music, movie or video clip when you are speaking, or when a student asks a question or gives a comment.

Some students who have auditory discrimination skills have difficulty with their middle ear muscles. The three smallest bones and the three smallest muscles in the body are in the middle ear. When we are trying to focus on a sound in the classroom, like the teacher's voice, and tune out the background noise of pencils sharpening, papers rustling and chairs moving, the muscles in our inner ear contract, which dampens the lower frequencies of the background noise, making the higher frequencies of the human voice easier to hear. Students with poor auditory figure-ground skills will have difficulty with this task. Keeping competing auditory stimuli to a minimum can help every student, and especially help this population.

In a recent study of children ages 8-13, novel sounds were introduced at random intervals into a learning episode. These auditory distractions not only increased the reaction time of the students, but decreased their performance accuracy on a visual discrimination task (Gumenyuk, et.al. 2004). Therefore, unexpected sounds in the environment not only make the students more jumpy and less calm, but lower their performance on academic tasks as well.

Visual

The rule is "Don't Leave Things Blank". That includes projectors, overhead projectors, computer screens, or television screens. This is distracting, and could be actually painful to some students with sensitive eyesight.

This skill also includes learning not to walk in front of a screen that is currently projecting something. The only exception to this rule is if you are doing this intentionally for a dramatic effect for the presentation.

Personal Stories

Explanation and Research

During my honeymoon, my wife and I were on an all-day bus tour with a fellow I'll call Cousin Danny. Cousin Danny was hilarious at the beginning of the eight hour trek, regaling us with personal stories and anecdotes of his travels and life experiences. He was hilarious that is, for the first 45 minutes. Then it got to be a little annoying for the next couple of hours. By the last few hours he was so annoying I was ready to organize a mutiny and leave him by the side of the road.

Fast forward twenty years to me teaching university classes. Full disclosure: *I could be Cousin Danny sometimes.* I get so excited to be with students that I forget sometimes that the rule is *It is more important for them to be interested, than for you to be interesting.* Stories are a powerful way to build rapport, give the students a change of state, and make them laugh so they get more oxygenated blood into their systems.

Here's how you do it

1. Don't tell too many personal stories. The students don't care if you got stuck in traffic, were up late with a sick child, or don't feel well. Relevant stories that help build rapport, make for a humorous state change, or make a real-world application or connection to the material being covered are acceptable, but in moderation.

Physiology

Explanation and Research

Make sure you pay attention to the physiological needs of your participants. They should know where restrooms and liquids are located and how and when they can access both. Paying attention to your student's physiology can also give you clues as to when you should do a state change with your students.

The Deleterious Effect of Dehydration

Research with young adults shows that mild dehydration corresponding to only 1% to 2% of body weight loss can lead to significant impairment in cognitive function (D'Anci, et al. 2006).

In one recent study, volunteers were denied water for a 24 hour period, resulting in a 2.6% loss of body weight. This impaired their effort and increased their tiredness when performing cognitive tasks (Szinnai, 2005). The lesson here is, if at all possible, make sure the students have ready access to water.

A note of caution however. Many studies that have been done on the effect dehydration has on children have had a very small sample size. Common sense tells me that students need to drink but the urban legend of "Everyone must drink eight glasses of water per day" is not backed by any scientific study. In fact, there is evidence that indicates having too much water can be detrimental (Valtin, 2002).

H2 Uh Oh!

It may come as no surprise, but the effect of a full bladder on attention has also been studied. The result? Surprise! The more urgent the bladder needs, the less attention was put on the cognitive task at hand (McCallum, 1968). Again, the lesson is clear, let your students use the restroom when the need is legitimate. By the way, this study was done with normal *and* neurotic students, so full bladders will apparently affect all of your students.

The idea of paying attention to physiology goes deeper than just drinking and going to the bathroom. You may want to consider ways to raise dopamine, noradrenaline and glucose in your students.

Dopamine

Dopamine is a brain chemical that helps with information transfer within the brain and promotes working memory and reward-seeking behavior (Luciana, 1998). Dopamine also feels good! When dopamine is prevalent in your system, you are feeling positive, hopeful and motivated.

Norepinephrine

Norepinephrine is the chemical name for adrenaline. Same chemical, just when it gets into the brain, the name changes. Interestingly, norepinephrine is often called noradrenaline, which is just adrenaline that is in the brain. Have you ever heard of the EPI pen? Epi is short for epinephrine—a shot of pure adrenaline!

Adrenaline can be a strong memory fixative and help us pay attention.

Glucose

Glucose is essential for brain function. The brain runs on empty. It does not have a supply of stored energy to burn. That is why the brain uses as much as 20% of the body's energy.

Here's how you do it

1. Stay Hydrated
2. How can a teacher naturally get dopamine into the system?
 - a. Voluntary movements of gross motor muscles. In the classroom, this could be done in the form of State Changes, the skill we conquered on Tuesday of this week's mini-course.
 - b. Experiencing strong, positive feelings. For example, in the classroom these could be celebrations at the end of a unit.
3. How can teachers get adrenaline naturally into the body?
 - a. A public performance such as giving a speech
 - b. Having a reasonable deadline for a task
 - c. Excitement in the class created by competition, comedy or some expression of the arts such as students performing a skit.

You Don't Got To Move It, Move It

Explanation and Research

Make movements purposeful. As I observe teachers and presenters, I often see movement they are distracting. I call it "Dancing the cha cha": moving a few steps toward the class, then a few steps away from the class, and repeating. I see teachers rocking backing and forth as they are teaching or doing what can only be described as nervous pacing. All of these movements can be, at the very least, distracting. At the very most, random or nervous patterns of movement may signal the class that you are unsure of yourself, or your grasp of the material. This could result in diluting or compromising your ability to control the class.

Stopping this can be a challenge. What I wouldn't want to see is a teacher who looks like a robot that never moves. What I would rather see is purposeful, natural movements. Below are some steps to help you identify, then eliminate, distracting movements.

Here's how you do it

Analysis

A useful first step to stopping distracting movement is analysis. You should ask yourself why the movement is occurring in the first place. Is it:

- To release nervous energy?
- Just a bad habit?
- A cover up for a lack of confidence or preparation?
- Unconscious communication? I had a boss once who always took a few steps back away from a group just before he delivered bad news about budget or staffing cuts.

Solutions:

Once the cause has been determined, perhaps you may try one or more of the following solutions:

a. Awareness

Videotaping oneself teaching and viewing that tape objectively can make you aware of any problems of this nature. Often, just being aware of the problem, and seeing your movements from the student's point of view is enough to stop.

a. Substitution

If the distracting movement is done to release nervous energy, I suggest substituting another activity that is less distracting:

- Try squeezing a stress ball while lecturing

- Go for a quick walk during class break to blow off some of that energy.
- Find out what relaxes you and do that before you start to teach. For me, if I can get the class to laugh, I am good and in the zone. If I find myself getting an overabundance of nervous energy, I facilitate the class doing an active state change.

Anchoring

To help combat nerves, learn how to anchor a positive state.

When you are having a great lesson, are feeling calm and in control, confident and competent, you should create a physical anchor so that state can be summoned at any time. For example, I have anchored that confident and competent feeling for myself. My unique anchor is I clench both of my fists tightly and shake them down towards the ground twice. It is a unique anchor, because I don't do that, ever in my day to day life. I only make this unique motion when I want to be in that particular state.

a. No-move exercise

This is only an exercise. To help stop distracting movement, you condition yourself to speak to the class only when you are standing perfectly still. If you are moving, do not talk. This exercise works wonders with teachers to raise their awareness of how much movement they are engaged in.