A students' DIY guide for making classes more brain-friendly (even when the teacher isn't thinking about that!)

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The teachers at this conference are thinking about "brain-friendly teaching". You probably are, too. But not every teacher is. The field, MBE (Mind, Brain & Education) is new and many teachers really don't know about it. What can you do in "brain-unfriendly classes?" DIY – Do it yourself. See which of these ideas make sense for you.

• **Go for emotion**. You brain loves emotion – which stimulates dopamine. That's connected to memory and motivation. (Reference: *M*, p.103. See below). But how can you go for emotion in class? Look for topics you feel strongly about. When you have a choice of topics for a project, go for the most interesting topics, not the easiest tasks. - Take notes (on your mind map). Illustrate them – funny or unusual pictures are best. - On your notes, what is interesting? Mark it ☺. What isn't: 😐 or ☹. What's important? !!!! So-so: ~ No: ✗ Some people like studying with music (instrumental). If it relaxes you, use it.

• **The human brain cannot multi-task** on cognitive (thinking) things (you can do physical and mental things at the same time) (*M*, p.115). When you try, you are really doing a series of single tasks and it takes your brain time to get started each time. When you are studying, turn off your phone and your computer (unless you are using your computer to study). Background music is ok if it relaxes you. Instrumental is better than vocal because you don't want to be paying attention to the words. By the way, no multi-tasking doesn't mean no distractions or breaks. Your brain needs a break from time to time.

• **Remember to repeat**. (*M*, p.125) During a lecture (the teacher is talking), silently repeat key phrases and new ideas. You want to really notice those.

• **Spaced repetition.** (*T*, p.132) Review and repeat information after class, the next day, etc. You want to move information from "working (short term) memory" to "long term memory." You do that by "revisiting" the information several times. After class. After school. Maybe on the train/bus on the way home. Tomorrow morning, see if you can remember the key points from yesterday.

• **Move.** Your body was designed to walk 10-20 km per day. Almost nobody does that now. But get into a routine of exercising and walking. (*R*, p.9) Move when you can in class. If the teacher says, "Pairwork. Find a partner." Stand up and find someone on the other side of the room to work with. Moving for 1 minute sends a 15% increase of blood (and therefore oxygen) to your

brain *(S,* p.34). Move In a class where you can't move around, maybe you can do stretching exercises like they recommend doing in airplanes. Here's a simple idea: For most people, leaning is social. Take a 20-minute walk with a friend during lunch. Tell your partner what you learned this morning. Listen to your partner. That way you are doing spaced repetition and movement.

• **Use many senses** (multi-sensory learning) *(T,* p.34). You learn more when using more senses. Ideas:

- If the teacher is lecturing (just talking), shadow silently (repeat silently). This adds physical (haptic/kinesthetic) action plus additional auditory input. And you are already watching so that is visual.
- If the teacher is talking with no PowerPoint, or a PowerPoint with lots of words and few pictures, imagine images to go with each key point.
- (*This is the most important idea in this part*). Make mind maps for note-taking and note-making. Get a pen with several different colors. Vary colors, writing styles, etc. Add pictures, dates, etc.

• **Learn to deal with stress.** You will experience stress. Everyone does. *(M,* p.57) And it is not necessarily a bad thing. What matters is how we deal with it. The first idea, *go for emotion*, suggests looking for interesting topics, not easy tasks. They might be more challenging but that increases "good stress." To deal with other stress, try to exercise at least 30 minutes three days a week. Some people like meditation. Yoga is good. Try slow yoga breathing, counting silently as you do it: breathe out (through the mouth)-2-3-4-5-6, hold you breath 2-3-4-5, breath in (through the nose) 2-3-4, hold 2-3-4-5. Do this 5-10 times. You can even do it on the train/ bus if it isn't too crowded and no one will notice. Try it in class before tests, etc.

• **Break lectures into 10-minutes chunks** mentally. It would be best if teachers broke up their talks into 10-minute parts – but many don't *(M,* p.120). But you can in your mind. If you can do this without losing track of what the teacher is saying, take a 30-second mental break every ten minutes. Breathe deeply, stretch (even though you are in your chair), think of a word or picture that describes the last ten minutes. Then focus on the teacher again.

• **Get enough sleep** *(M,* p.37)**.** That is when information moves from working memory to long-term memory. This happens in your hippocampus— which is just as important to your learning as your university campus. "An hour of sleep is at least equal to an hour of studying." If you have time and a place to do it, take a short nap (a short sleep) early or mid- afternoon. A NASA study found that a 26-minute nap lead to a 34% increase in productivity. (BTW, I'm not suggesting sleeping in class (-ｏ⌒).)

References: ***M*** = Medina, John (2014)*Brain Rules*. (2014). Seattle: Pear Press. (available in 日本語)
R= Ratey, John (with E.Hagerman) (2008) *Spark:…Exercise and the Brain.* New York: Little Brown.
S- Sousa, David A (2011), *How the Brain Learns*. Thousand Oaks, Ca: Corwin.
T= Tokuhama-Espinosa, Tracey (2014). *Making Classrooms Better.* New York: Norton.
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