**Pseudo Transcript:** to the long version

**Slide 1:** How to build an EF-Friendly Classroom Slide Presentation

**Slide 2:** What is Executive Function? There are many different formulations and they typically overlap with each other. We'll use the EF model by Dr. Thomas E. Brown (from 2007), based upon over 25 years of clinical interviews and research with children, adolescents, and adults (with ADHD).

Although the model above shows 6 separate clusters, these functions continually work together, usually rapidly and unconsciously, to help each individual manage many tasks of daily life.

I know right now what you must be thinking. "We've always had students with difficulties in these areas." That is true, but it is unfathomably worse now. Fifteen years ago, had I said that a student was not motivated, I would have meant that they had the capability, and they knew that they had the capability, they just didn't want to put out the effort. The student that I am talking about has the capability, but they not only do not know that they have the capability, they have no idea how to develop the capability. Many students are like someone in a kayak who just left a relatively placid pool. [I know that the teens are not placid, but I am thinking of the pool of responsibiliities and chores.] They have this double-ended paddle with them but they've not had to use it with the gentle current of the pool they've been in. They've almost even forgotten that they have it with them. Up ahead (18, college, being away from home, 21, ...) there are rapids to navigate and perhaps even a waterfall to deal with. The paddle will be essential, but they have almost forgotten that it is there, and they have no idea how to use it to good effect. Biologically, the students are still just as capable as students in the past, but there have been few instances in their life where life required them to reach for and learn how to use the necessary tools, and they avoided some of those instances. As we move along think of this as an analogy for our student's understanding of themselves and of what it takes to succeed in our academic environment.

That makes it all the more difficult to reach these students.

We often begin planning for our classes with our experiences with our previous students: where did they begin, what did they need, etc. The first time that we taught, we probably thought of what we needed or what our former classmates needed. Our students have always been changing, and so we had always needed to plan for adjustments, but major changes in our students began in the last half of the last decade, and those changes have accelerated since we've begun seeing students who are products of COVID-ERA instruction. Thus, while each semester we might be planning to provide explanations which our previous students would not have needed, it might still be assuming sophistication which our students do not yet have. I believe that up to 25% of our students are lacking even the context for our planned entry-point, and another 20% are affected to lesser but significant degree.

**Slide 3:** There are a number of reasons why a student might not get started on an assignment. Sometimes procrastination is typical procrastination, but sometimes it is because the student really is lost, overwhelmed, or doesn't have a sufficient sense of the whole task. They simply

might not know where to begin.

**Slide 4:** Many students have had little experience having to focus the way that one must, in order to grasp complex ideas. Did you know than some high schools no longer require the reading of novels during their 4 years of English. They do read excerpts from novels and answer questions on those excerpts (because that is the form of questions on the ACT and SAT)! As with so many of these things, it is not their teachers' fault; it is the testing regimen forced upon them by NCLB and RTTT. That is a huge loss of opportunity to develop focus.

**Slide 5**: While this might be at least partially due to a lack of experience having to give their all to complete a responsibility or an assignment, it could be more elementary: effort is a part of a chain of components to completing an assignment or work. How meaningful is the effort link of the chain, if several of the other 5 links (EFS) are weak.

**Slide 6:** There are plenty of reasons for the student to be stressed already. They are now in college, probably away from home for the first time, having to independently take on many responsibilities and facing a level of academic rigor to which they are unaccustomed.

**Slide 7:** Now in college, there are greater demands on their working memory than ever before, they have new stresses which are occupying some of that working memory capacity, and new levels of expectations that they are having to juggle as well. Working memory can only hold about 4 or 5 concepts, and these are quickly filled, with items extraneous *and* germane.

**Slide 8:** They have a new set of experiences to sort and become accustomed to, and the speed with which these new experiences come, is overwhelming; how can they make the right action decisions in time to act appropriately.

**Slide 9:** …and these all have to interact with one another.

**Slide 10:** While many of the students with these Executive Function deficits do not have ADHD, they do have these deficits and to help them be successful in our courses we likely need to address these deficits to some degree.

**Slide 11:** Cognitive load is the sum of what our brain is processing in active memory while trying to learn what is placed before it. You can see how this is going to affect Memory, Focus, Emotion, and Effort.

**Slide 12:** The material that we are to learn on a given day is going to require some cognitive load just due to its complexity. Of course, this load is even greater for the student who is weak in that material. Communication between the teacher and the students about the various aspects of that material is going to add its own cognitive load to process. Extraneous cognitive load are those components of instruction that are adding to the load without adding understanding which is not already being given in some other form.

**Slide 13:** One of your handouts is this poster, which is a quick guide to reducing the cognitive load necessary for a student to learn the new material. Notice that it is recommending that the teacher start with greater supports and slowly make the student responsible for more.

**Slide 14:** Graphic organizers are useful for reducing cognitive load, partially because we are visual creatures and it reduces the load of language processing. Any sort of multitasking or duplication of information should be avoided, and the guidance of examples is helpful.

**Slide 15:** …and here are more specific guidelines which suggest the value of clarity, guideposts, organization, and not depending upon only speech or only writing.

**Slide 16:** The next 6 slides come from two of the handouts. There are some nice suggestions there, although some might work better for K-12.

The main emphasis of this slide (and some others) is on giving an explicit roadmap for where they are and where things are headed, and from that, how one starts the typical problems. It also suggests that you get the student to start self-observing themselves to see the habit aspects of procrastination.

**Slide 17:** These are also largely based upon the roadmap, but also have a component of keeping them on task. It is also suggested that you get the student to start self-observing themselves to see where focus slips.

**Slide 18:** More or less, having some organization, a means of keeping activity going, and setting a routine to help activity be more natural. Perhaps get the student to start self-observing themselves to see where effort wanes.

**Slide 19:** I believe that the brain dump would have value. I fall asleep almost instantly each night, but often I awake in a few hours with a bunch of worries or uncompleted tasks spinning about my head. If I get up and write them down, it is like tagging them and I can go back to bed with those worries no longer there. Otherwise, these are things to take the emotional component out of the front of their mind. However, I would feel out of my element to do that.

**Slide 20:** Having a way to offload any items is handy. Plus, if you can help them chunk some concepts together so that they are all one piece, then all those ideas can occupy just one of those 4 registers of memory, leaving more room to weigh others in trying to solve a problem.

**Slide 21:** These mostly provide an automatic way to categorize what they are facing so the better know what actions to take.

**Slide 22:** These students are also not acquainted with a study-style sufficient for being successful in college-level courses. Here is an outline; it is one of your handouts has additional ideas on the back.

**Slide 23:** Good notes play a role in this, and a suggestion is to show student how to use the Cornell or two-column note-system. Although it is unclear from this picture, their in-class notes occupy one side of a piece of paper and the blank side becomes a 'Sweat Page' for them to use to summarize and explore the next page of notes which is opposite to.

**Slide 24:** Last Fall I graded a large quantity of student work in MAT 110, and eventually what came across to me was that about 40% of the did the work just to get it checked off a list, with little thought at all...just to get past it. By mid-term I thought 'These students are just living from moment to moment, and not in the good *mindfulness* sense, but just to get out of one moment and into the next. Thus, when I saw this video, as a part of the course, it resonated with me. I will play some excerpts and bring particular emphasis to the last few minutes of the video. Here are a few items from the video.

> • A concept remains in our brain for 10–20 seconds unless we process it…ask question about it, think about what is missing, write it down, repeat it to someone else, weigh its truth value. We need to process what is going on at the moment, not 10 minutes later. And when we get home we need to look over what we've written and think about it.
> • We are built for imagery so we need to use images and write things down that way.
> • We are meaning-making machines. We try to make meaning out of everything that happens to us. We need to organize and structure that.
> • We all start as novices. Everything we do is an approximation of sophistication. We should expect it to change over time. We have to support that. The support may come in asking people questions. …maybe giving them an organizational chart with some guiding images, which they are to complete.
> • The take-home message from a working memory capacity standpoint is this: What we process, we learn. If we're not processing life, what is going on around us, we're not living it. Live life.

They have so much potential, but lacking even knowledge of the tools for finding and developing that potential, they see themselves as nearly helpless entities in an increasingly complex and demanding world.