Designing an Executive-Function Friendly Classroom

Ideas from Landmark College's

LDN 633 Academic Strategies and Executive Function Supports for Students with LD, ADHD, or Autism

What are Executive Function (EF) Skills?

Executive Function	
Activation	Organizing, Prioritizing, Activating to Work
Focus	Focusing, Sustaining Focus, Shifting Attention to Tasks
Effort	Regulating Alertness, Sustaining Effort, Processing Speed
Emotion	Managing Frustration, Modulating Emotions
Memory	Remembering Directions, Sequencing of Ideas, Holding Information while Accessing Information
Action	Monitoring Action, Regulating Behavior

Executive Function Issues: Activation

- Difficulty organizing tasks, materials
- Difficulty estimating time, prioritizing tasks
- Trouble getting started on work
- Feels overwhelmed, Procrastinates excessively
- Can be excessively rigid; a perfectionist

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

Executive Function Issues: Focus

- Mind drifts when reading or during class
- Becomes sidetracked or distracted easily
- Has difficulty grasping main idea
- Gets lost in daydreaming,
- Stares off into space; doesn't seem to be listening

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

Executive Function Issues: Effort

- Difficulty regulating sleep and alertness,
- Quickly loses interest in tasks, particularly longer tasks; doesn't sustain effort
- Difficulty completing task on time, especially in writing

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

Executive Function Issues: Emotion

- Emotions affect thoughts, actions too much,
- Difficulty managing frustration, irritation, worries, modulating emotions
- Becomes irritated easily
- Sensitive to criticism

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

Executive Function Issues: Memory

- Difficulty holding several things online while attending to other tasks
- Difficulty remembering directions
- Difficulty remembering sequencing of ideas
- Difficulty accessing stored memories, and integrating with current information to guide current thoughts and actions

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

Executive Function Issues: Action

- Difficulty controlling actions
- Difficulty monitoring and regulating behavior to fit aims or needs
- Difficulty slowing down or speeding up as needed
- Doesn't size up ongoing situations carefully

Brown, Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders, 2005

…and these six functions continually work together, usually rapidly and unconsciously, to help each individual manage many tasks of daily life.

Aren't students with ADHD already getting assistance?

- Not necessarily; but stresses in college might expose existing undiagnosed ADHD
- EF deficits may result from the attention disruption and opportunity cost of social media, phone usage

The Anxious Generation, Jonathan Haidt, 2024

What are some academic supports for students with EF Challenges?

First let's look at Cognitive Load, the effort being used in working memory, where we manipulate stored information.

Cognitive Load and Working Memory greatly affect four of the six clusters of Executive Function

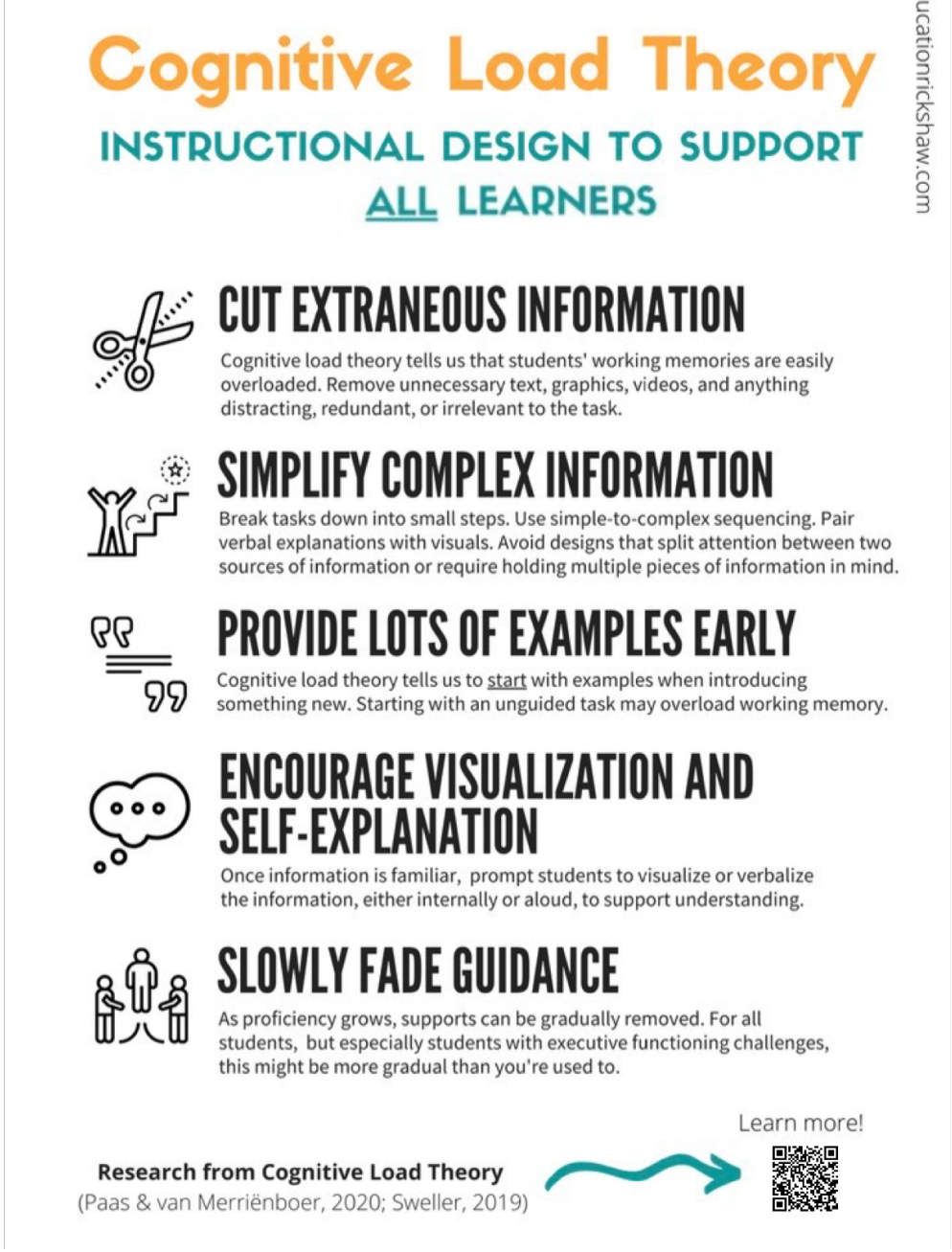
Cognitive Load

- Intrinsic load:

  the complexity inherent in the material to be learned
- Extraneous load:

  instructional components that don't contribute to learning
- Germane load:

  instructional components that contribute to learning



this poster is a handout

Instruction for students beginning in a discipline is most efficacious if it

- does not overload working memories with extraneous or duplicated information
- does not require multitasking
- is direct; for instance, it involves worked examples
- involves graphics and organizational aids

Suggestions to reduce Cognitive Load

- build a routine into the class day
- start each day with a roadmap for the day, and where it fits in their knowledge
- give more clear guidance on connectors to their knowledge base
- involve worked/demonstrated examples
- have specific directions and guidelines in writing
- have graphic organizers and/or videos to support the more complex topics

A Few Classroom Approaches for EFS

There is a general list in handouts

Activation:

- Opening Ice-breaker quiz each day
- Require they answer quizzes from intuition
- Use organizational diagrams
- Frequent exams (weekly for 4, 5 hr courses)
- Homework experience in class

A Few Classroom Approaches for EFS

There is a general list in handouts

Focus:

- Opening Ice-breaker quiz each day
- Require they answer quizzes from intuition
- Use organizational diagrams
- Frequent exams (weekly for 4, 5 hr courses)
- Create timeline for how topic fits with previous and upcoming material
- Tagging thoughts, self-observation

A Few Classroom Approaches for EFS

There is a general list in handouts

Effort:

- Require quiz answered from intuition
- Use organizational diagrams, charts
- Use videos w/ major concepts, processes
- Frequent exams (biweekly for 3 cr. hr) ·
- Self-observation: when does effort slip?

A Few Classroom Approaches for EFS

Emotion:

- Open with joke/fact of the day
- Have a 5-minute brain dump (student writes down everything cluttering their mind before class begins)
- Have frequent formative assessments*

A Few Classroom Approaches for EFS

There is a general list in handouts

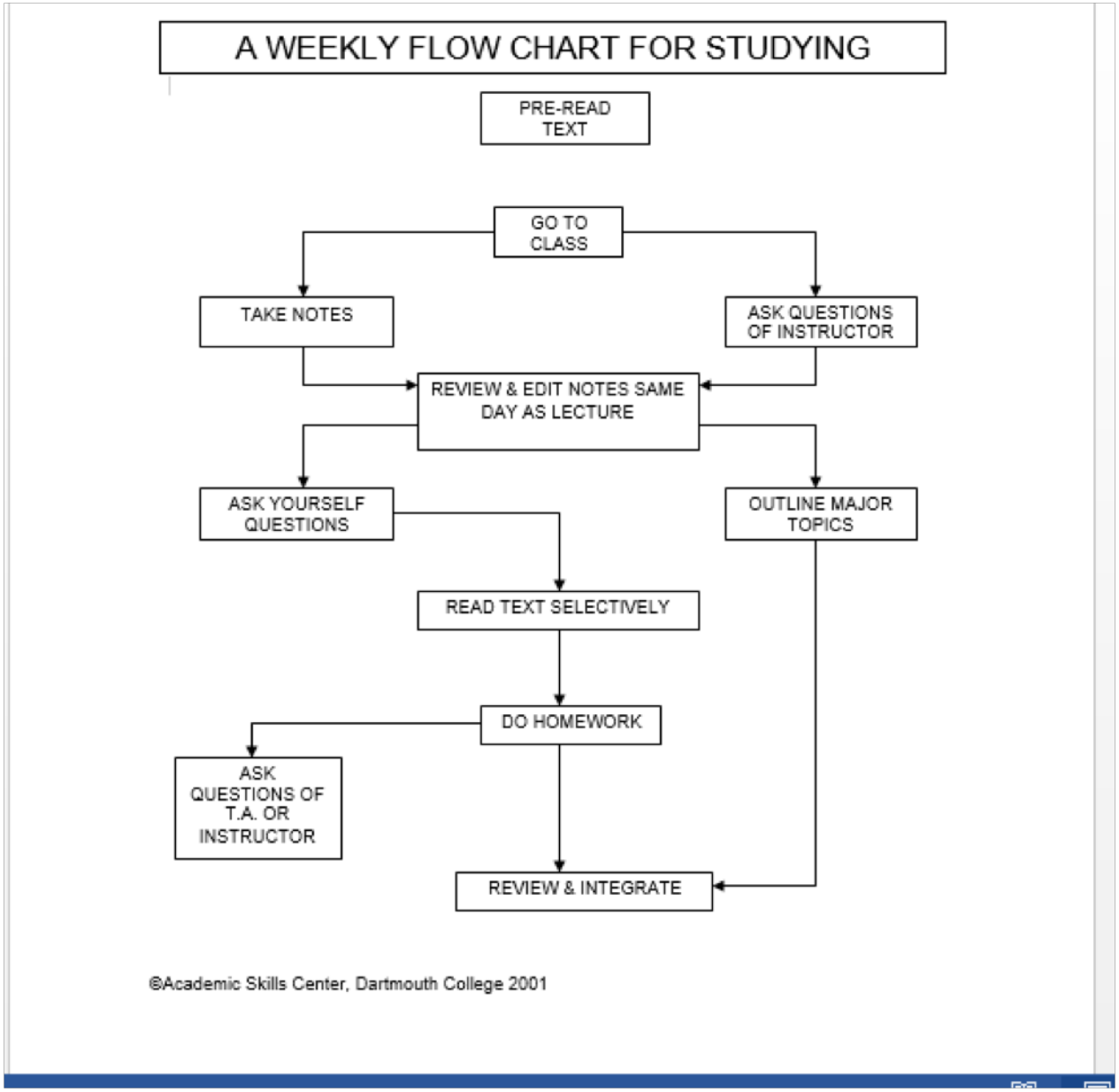
Memory:

- Require quiz answers from intuition
- Use videos for major concepts, processes
- Keep introductions lean and concrete
- Do not unpack notation, concepts, procedures on the same day
- Connect past content to new content (schema maps… a schema is a mental framework for organizing information)

A Few Classroom Approaches for EFS

Action:

- Post an agenda, and track on a one-page calendar
- Single daily action plans
- Prioritize important tasks from lesser so
- Have students send self reminders, self monitor


A WEEKLY FLOW CHART FOR STUDYING
PRE-READ TEXT
GO TO CLASS
TAKE NOTES
ASK QUESTIONS OF INSTRUCTOR
REVIEW & EDIT NOTES SAME DAY AS LECTURE
ASK YOURSELF QUESTIONS
OUTLINE MAJOR TOPICS
READ TEXT SELECTIVELY
DO HOMEWORK
ASK QUESTIONS OF T.A. OR INSTRUCTOR
REVIEW & INTEGRATE
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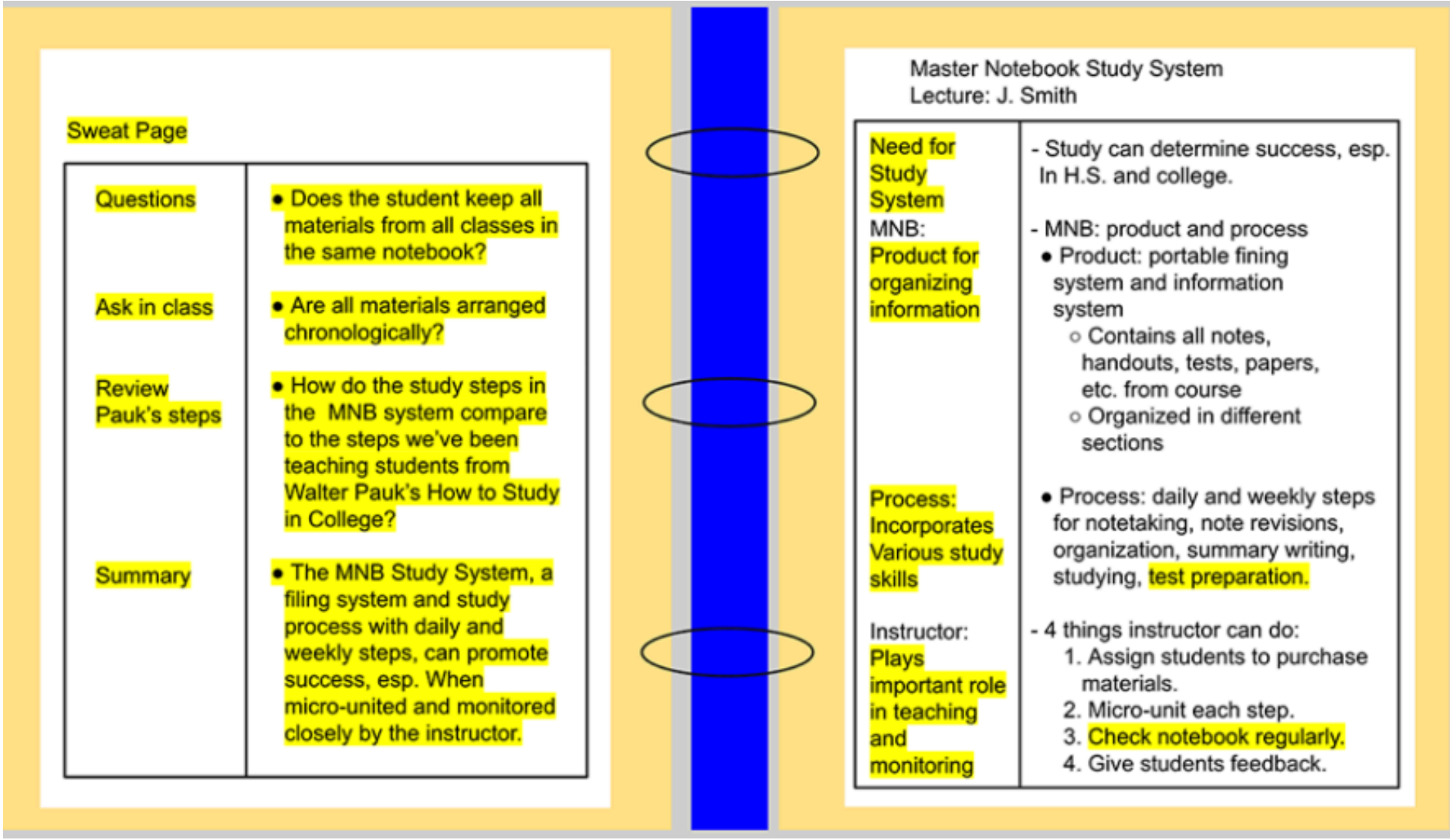

From LDN 633, Landmark College

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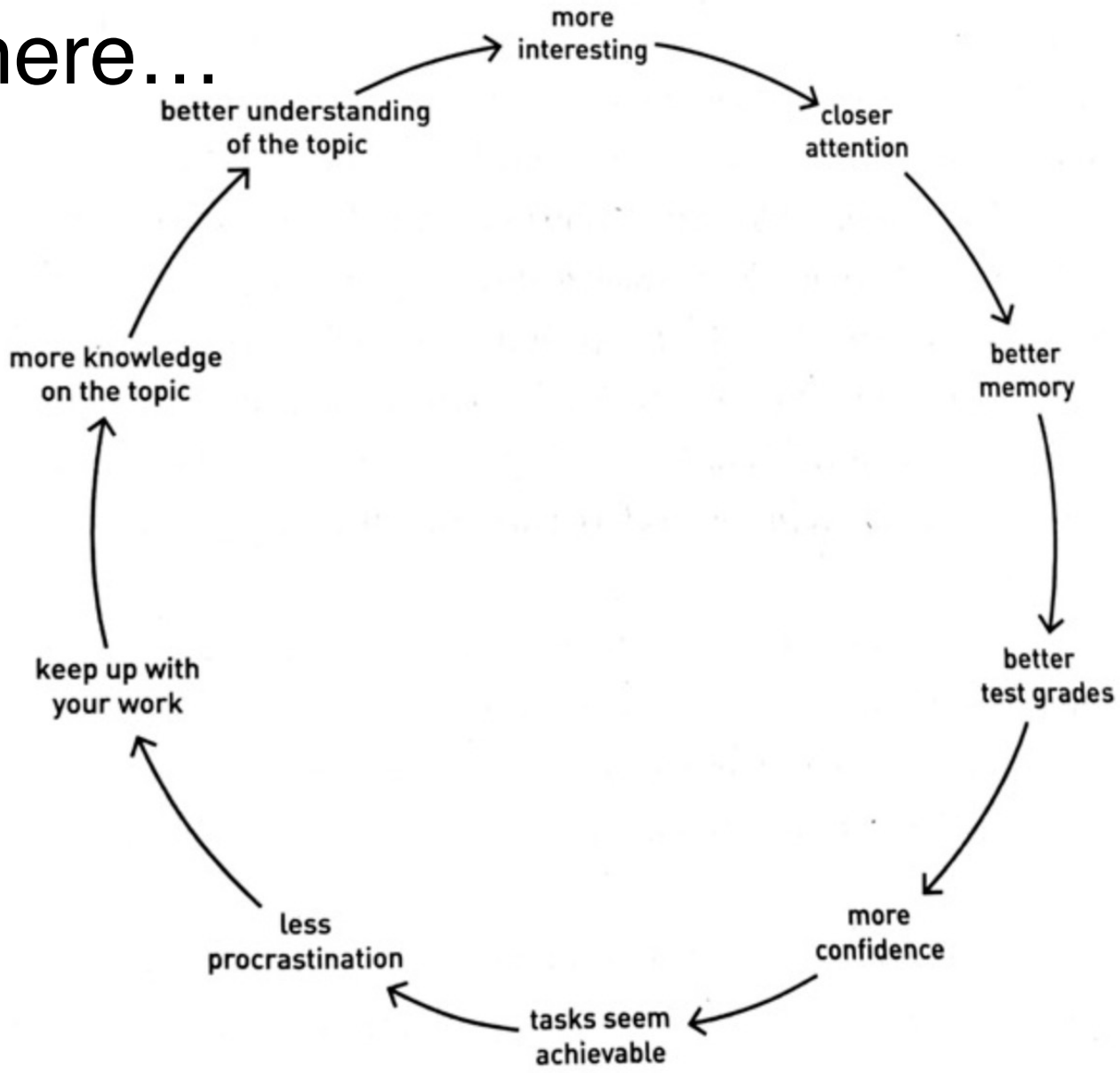

From “Outsmart Your Brain” Daniel T. Willingham

Finally, an excerpt from an enlightening TED talk on working memory, by educational psychologist Peter Doolittle

1. Sweller, J. 2010. *Element Interactivity and Intrinsic, Extraneous, and Germane Cognitive Load*, Educational Psychology Review
2. *Cognitive Load Theory: Research that teachers really need to understand*, Centre for Education Statistics and Evaluation.
3. Thomas E Brown, *Outside the Box: Rethinking ADD/ADHD. 2017 Attention Deficit Disorders*, 2005
4. *Attention Deficit Disorder: The Unfocused Mind in Children and Adults*, Thomas E Brown, Yale University Press, 2005
5. Poster courtesy of Education Rickshaw https://educationrickshaw.com
6. [Presentation Handout:] Landmark College (2025), *Strategies For Managing Executive Function Challenges,* Class handout. Putney, VT: Landmark College.
7. [Presentation Handout:] Landmark College (2025), *Supporting Executive Functions in the Classroom,* Class handout. Putney, VT: Landmark College. Sources: 1. Brown, T.E. (2001) *Manual for Attention Deficit Disorder Scales for Children and Adolescents;*
and 2. Barkley, R.A. (1998) *Attention-Deficit Hyperactivity Disorder,* Scientific American