

# *RESEARCH AS REFLECTION:*

HOW TO RECONNECT STUDENTS TO THEMSELVES  
THROUGH ENGAGING INFORMATION LITERACY INSTRUCTION

**CATHERINE A. BALDWIN,**

INSTRUCTION SERVICES LIBRARIAN

UNIVERSITY OF PITTSBURGH, BRADFORD CAMPUS

CAB137@PITT.EDU

**WPWVC-ACRL Virtual Spring Conference 2022**

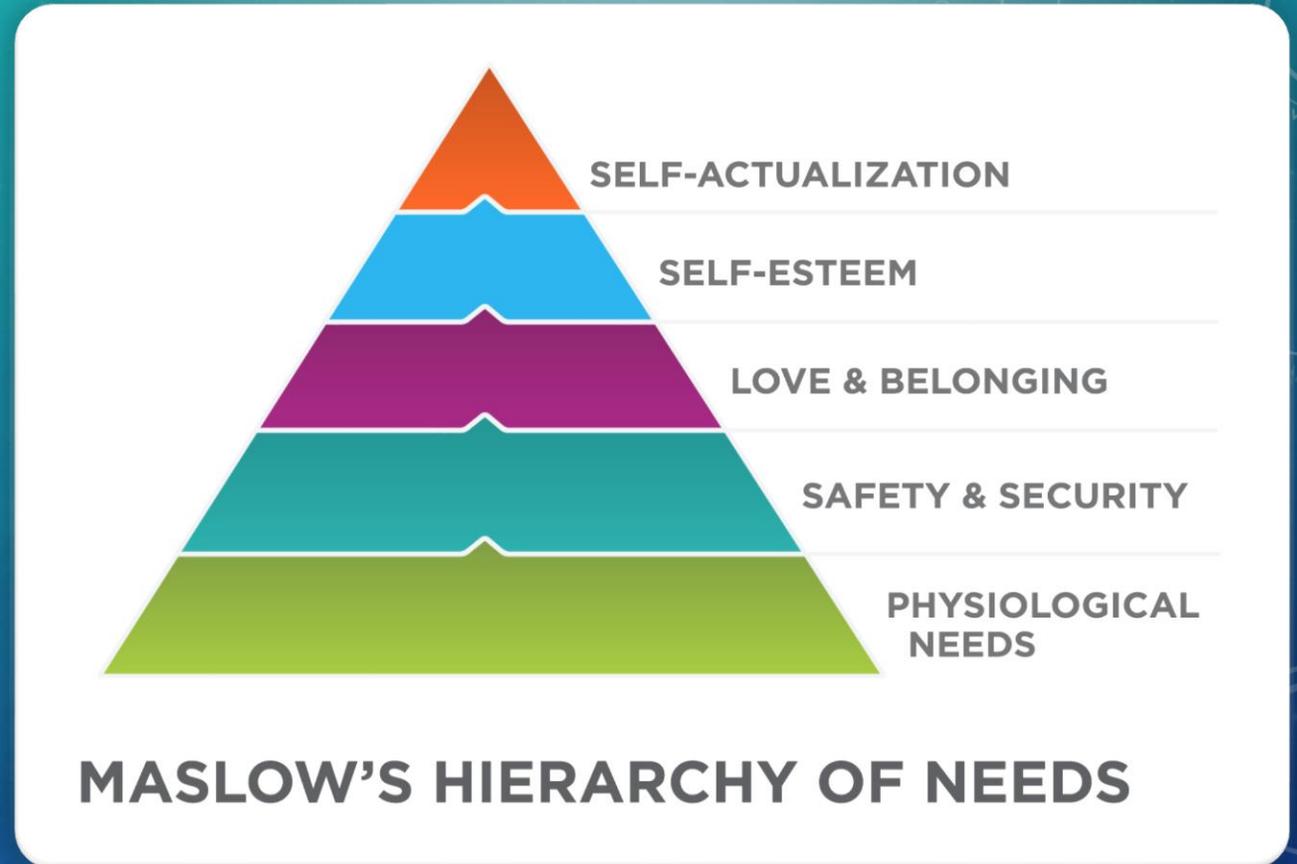


# STRESS EFFECTS ON STUDENTS

## Maslow's Hierarchy of Needs

### Covid-19 Pandemic

- Disconnection
- Erosion of Executive Functions



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# *A UNIQUE POPULATION:* EMERGING YOUNG ADULTS & CHILD DEVELOPMENT

- Traditional students are..... **children.**
- Age 25: benchmark for complete brain development: frontal lobes, prefrontal cortex.
- Executive Functions = skills necessary to accomplish daily tasks.
  - Up to 40? Some say only 1: Central Executive.

## ***SCENARIO:***

**You are 19 years old and enrolled within a college course.**

**You are assigned a 5-page research paper using APA format, due in 5 days.**

***What steps are involved in this process of completing a research assignment?***

# EXECUTIVE FUNCTIONS OR *SKILLS*

According to Dawson (2021),

**11 best suited to success in schooling:**

- 1) Response inhibition
- 2) Working memory
- 3) Emotional control
- 4) Flexibility
- 5) Sustained attention
- 6) Task initiation
- 7) Planning/ prioritizing
- 8) Organization
- 9) Time management
- 10) Goal-directed persistence
- 11) Metacognition

- 1) Thinking first, acting second.
- 2) Remembering recent information to manage or apply it.
- 3) Managing emotional responses, states.
- 4) Changing strategies, reconsidering approach.
- 5) Ignoring distraction, coping with boredom
- 6) Starting tasks, avoiding procrastination.
- 7) Strategizing to reach a goal.
- 8) Keeping track of assignments, materials.
- 9) Awareness of, organization of time.
- 10) Focusing until goal is met.
- 11) Self-monitoring during, self-evaluating after project.

*• How essential are these skills to a student's success as a university student?*  
*• How successful were you as an undergraduate student?*



# SUPPORTING STUDENTS' EXECUTIVE SKILL DEVELOPMENT

*What difficulties do students experience?*

*How can I support them through the process?*

"HIDDEN CURRICULUM"

# THINKING PATTERNS

Emotional reaction

Intuitive thinking

Limbic system  
is default



Amygdala,  
hypothalamus, basal  
ganglia

Critical, deep thinking

Analytical thinking

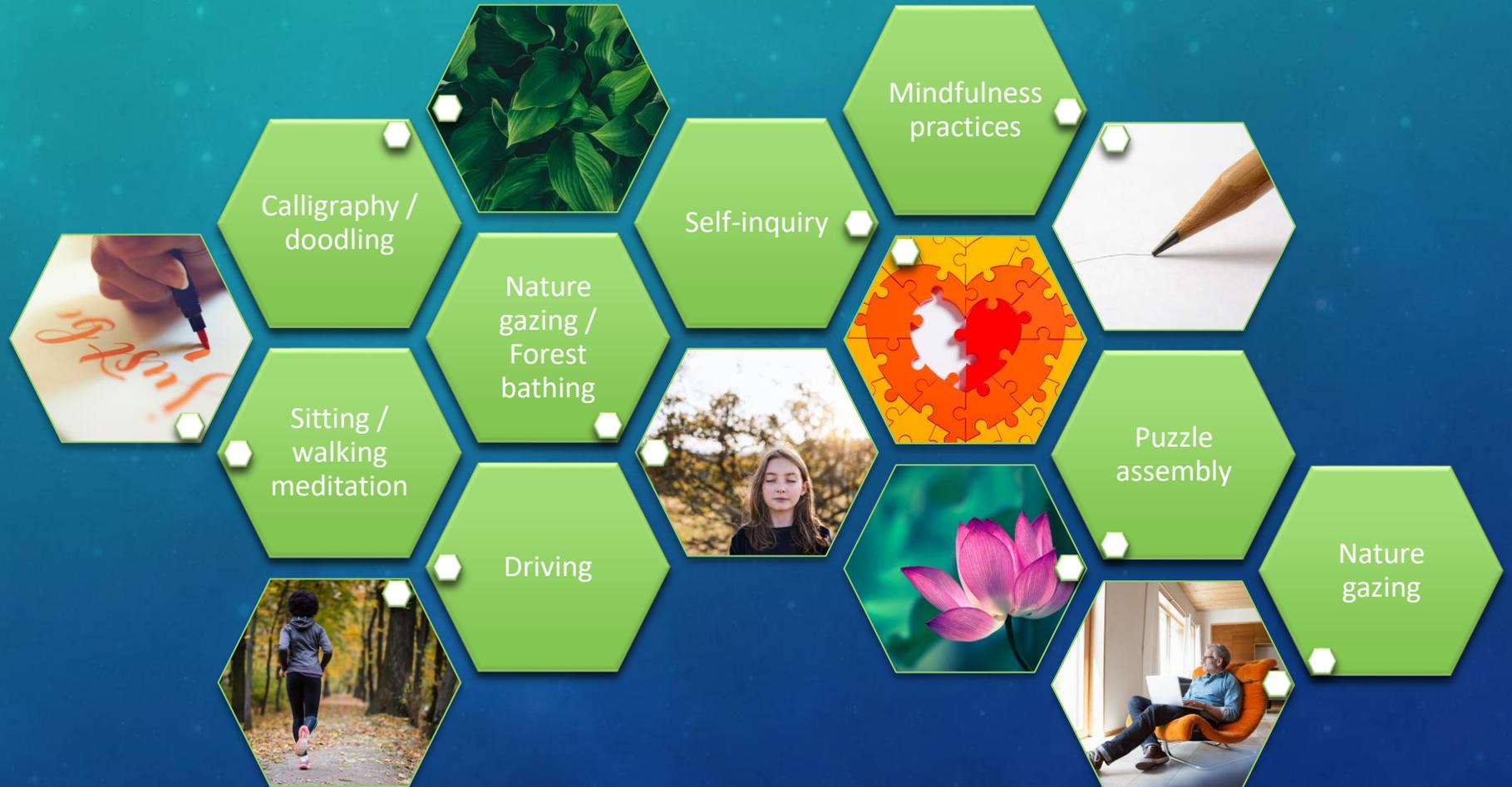
Reflective  
thinking is  
secondary



Neocortex area

- Interior cingulate cortex, prefrontal cortex, hippocampus

# CONTEMPLATIVE PEDAGOGY



Learning as personal

Learning as individual

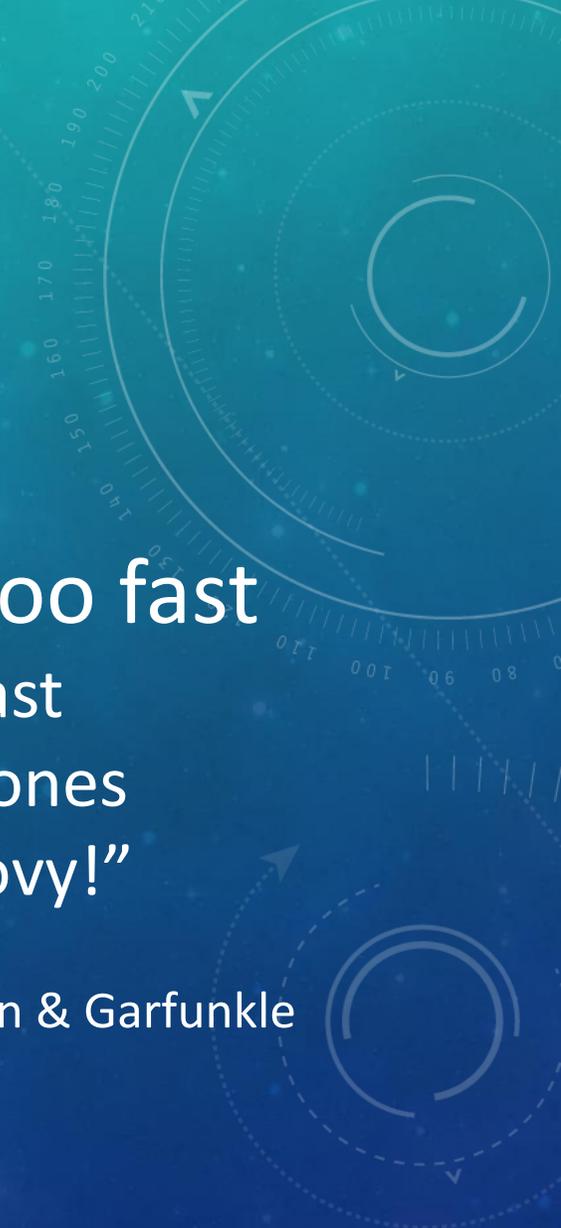
Learning as interior



# MIND YOUR SPEED

*“Slow down, you move too fast  
You got to make the morning last  
Just kickin’ down the cobble stones  
Looking for fun and feelin’ groovy!”*

*-59<sup>th</sup> Street Bridge Song, Simon & Garfunkle*



# MORE THAN JUST "SLOW"

## Traditional Approach

(Quick)

Mechanical

Technical

Behavioral

Strategic

Skills-based

Vs.

## Critical Approach

(Slow)

Critical

Problem-posing

Multidimensional

Creative

Intellectual

Process-based

Supportive of student agency



# BENEFITS OF MINDFULNESS

## Physical

Slower  
brain  
ageing

Reduced  
stress  
hormones

Higher  
Executive  
Function

# BENEFITS OF MINDFULNESS

## Psychological

Sense of  
calm

Increased  
attention

Decreased  
stress

Improved  
decision  
making

Emotional  
regulation

# BENEFITS OF MINDFULNESS

## Pedagogical

Deep learning	Focus	Quality over quantity	Enjoyment of learning	Intrinsic motivation	Improved retention
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# PLAY & CURIOSITY IN LEARNING

- Dutch historian Huizinga (1872-1945)
- Play is for all ages.
- Is state of focus and transcendence.
- Play allows deep engagement.
- Experimental
- Employs both “explicit knowledge” & “tacit knowledge”.
- Play-experience-learning
- **PpBL: Play & Problem-Based Learning**



Elements of Play

# CONNECTION & REFLECTION

- **Connect** with your students: positive learning environment.
- **Respect** ideas, inquiry, topics, background of students.
- **Teach and model acceptance** of difference: opinions, ideology, culture.
- Emotional safety enables risk taking.
- Emotional connection to learning





AN EXAMPLE....

# APPROACHES TO RESEARCH INSTRUCTION

## Create classroom atmosphere

- Emotional safety allows learning risks.
- Frame research for students: it is personal and valuable.
- Spend time with unmotivated students.
- Talk to students, encourage and guide them, & take them seriously.
- Connect with students: Be positive, approachable, professional.
- Offer or point out incentives or rewards.

## Create classroom support

- Provide scaffolding : checklists, reference pages, research guides, recorded tutorials, consultations.
- In collaboration with faculty, create a checklist incorporating assignment parameters and requirements.
- Incorporate organization skills to support Executive Functions.
- Model pathways, "think out loud" to expose hidden curriculum.
- Provide printed & digital pathway instructions for reference.
- Record tutorials.
- Offer consultation signups during class.

## Promote thinking & engagement

- Increase motivation through curiosity.
- Encourage student choices.
- Allow students to use smartphones.
- Apply mindfulness and other contemplative pedagogies.
- Utilize Universal Design for Learning techniques for improved access to participation and expression of learning
- Increase engagement by allowing students to "see themselves acting as learners" through measured independence.
- Include an element of peer work or discussion.
- Encourage students to brainstorm or explain topics to peers (social aspect, critical thinking).
- Include quiet, reflective thinking time.
- Encourage a sense of play and wonder.

## Lead research work

- Employ *flipped learning methods* to free class time for deeper learning experiences.
- Choose amount of instruction material carefully: simplify to save time.
- Allow students to complete research steps independently, after guidance, then interview them for progress.
- Offer non-graded experiences with playful experimentation with library system searches.
- Ask students questions to spark engagement & curiosity.
- Pose a problem requiring a solution for Play & Problem-Based Learning experiences.
- Offer hands-on learning experiences and active learning instead of lecture.
- Encourage students to slow down and focus on one thing at a time.
- Share enthusiasm that research is about discovery – of information and also our inner selves.

# COLLABORATIONS : FACULTY

- Integrate research work into coursework across disciplines.
- Embed librarians and information literacy into courses.
- Embed critical, reflective thinking into ILI.
- Support student development of Executive Functions.
- Encourage more play for student engagement.
- Advocate for student-centered learning experiences.



# REFLECTION IN *REFLECTION*

- Students will reconnect with and see themselves if they are given the invitation to become personally involved in the research they perform.
- This requires thoughtful instruction which makes time for reflection so that students can employ personal curiosity for meaningful learning.





# CONTACT INFORMATION

**Catherine A. Baldwin,**

Instruction Services Librarian

University of Pittsburgh, Bradford Campus

[cab137@pitt.edu](mailto:cab137@pitt.edu)

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