THE FLOW

OF STUDENT SUCCESS

Gary Gute, PhD

Deanne Gute, PhD

University of Northern Iowa
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mattbeardart.com/flow

Part I   context

IowaBIG Study: Students about to Transition to College

Hannah
Sophie
Jemar
Chavi

"It was scary you know, especially struggling academically in a traditional system, what it was going to look like for me. It was ingrained in my head that going to college, that's the only way to success, and in college you had to be successful."
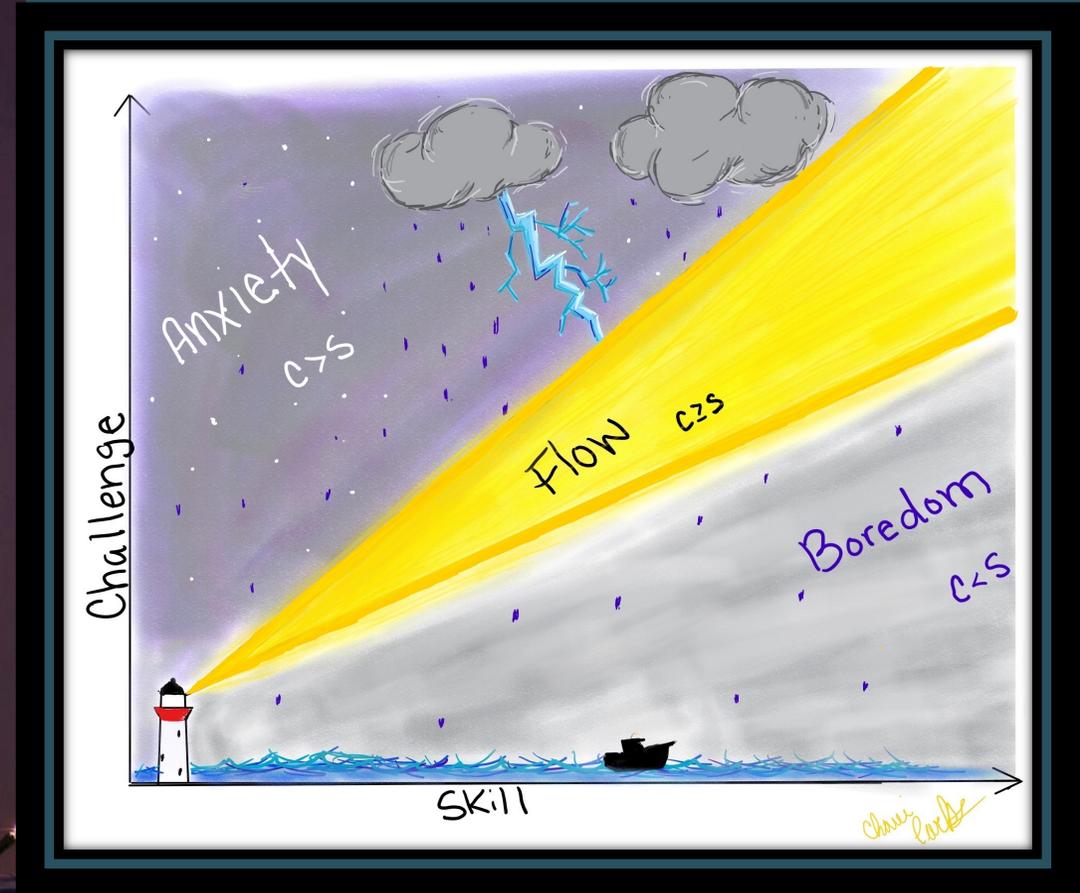
www.ncbi.nlm.nih.gov/pmc/articles
/PMC8750929/

Prevalence of Anxiety in University Students during the COVID-19 Pandemic: A Systematic Review

Shefali Liyanage,[†] Kiran Saqib,[†] Amber Fozia Khan, Tijhiana Rose Thobani, Wang-Choi Tang, Cameron B. Chiarot, Bara' Abdallah AlShurman, and Zahid Ahmad Butt[*]

Fortunato Battaglia, Academic Editor

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# Over 9 in 10 College Students Report Mental Health Impacts From COVID-19

In a new BestColleges survey, 95% of college students say COVID-19 has negatively impacted their mental health, which, in turn, has affected their education.

by Staff Writers
Updated October 18, 2022

Image Credit: LajosRepasi / E+ / Getty Images

www.bestcolleges.com/research/colleg
e-mental-health-impacts-from-covid-19/

Flow **Optimal Experience** **"In the Zone"**

Our *best* moments are not the passive, relaxing ones, but the ones that occur when our body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile. We *make* flow happen when we concentrate completely on a challenging, but realistic, goal. In flow, we bring order to chaos and meaning to blank slates.

Flow, 1990

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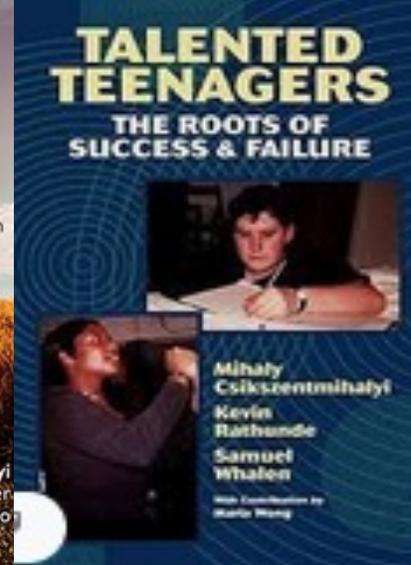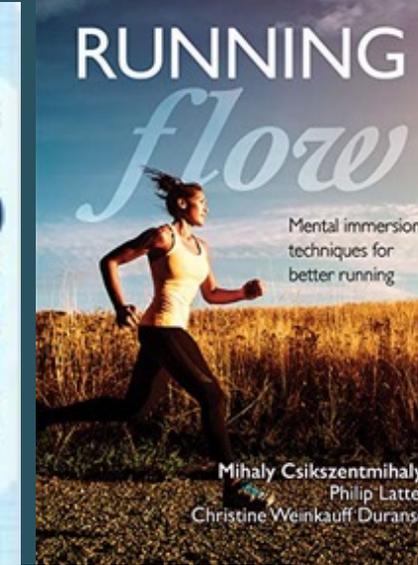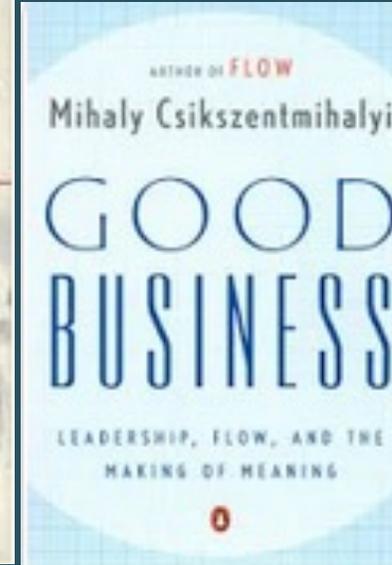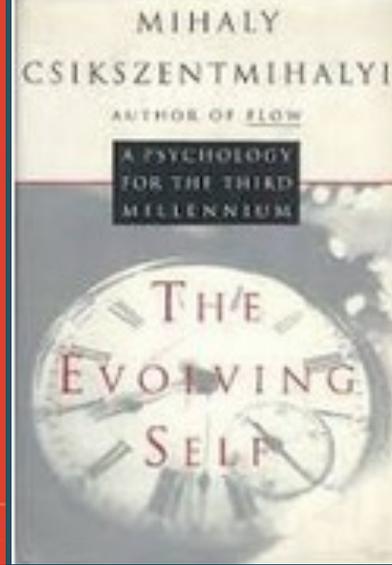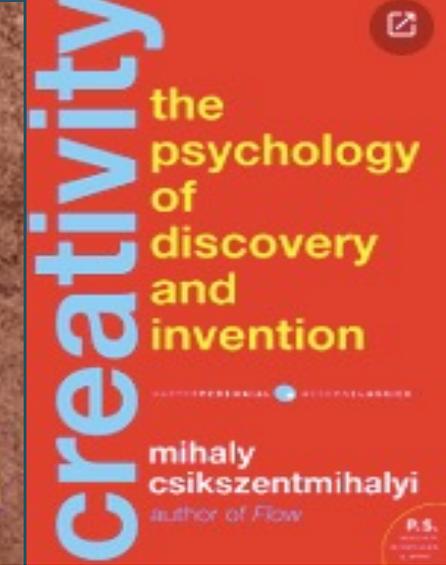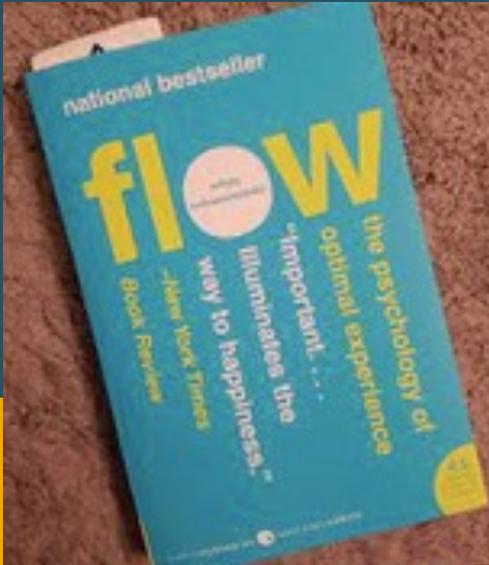
Where do you find flow?

DRESSED FOR FLOW

youtu.be/GskKqNRcg7g

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"Complex life forms depend for their existence on a capacity to extract energy out of entropy, to recycle waste into structured order."

Flow, 1990

**Disorder and Disruption in the
Flow of Psychic Energy**

Anxiety

Feeling that you have more to do than you can actually accomplish

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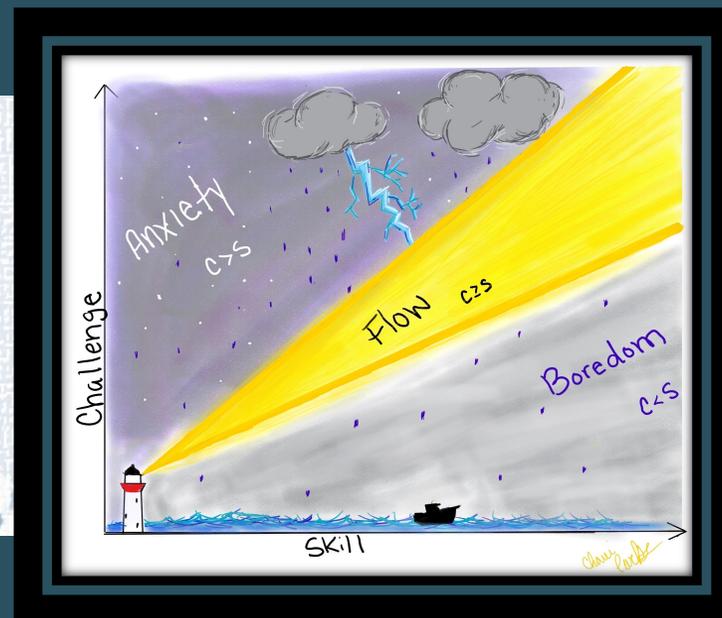
feeling that there's nothing *worth* accomplishing/doubting what you're capable of accomplishing

Wanting to do more with your skills than what conditions allow

"*The roots of learning are bitter, but the fruits are sweet.*"
— Cicero
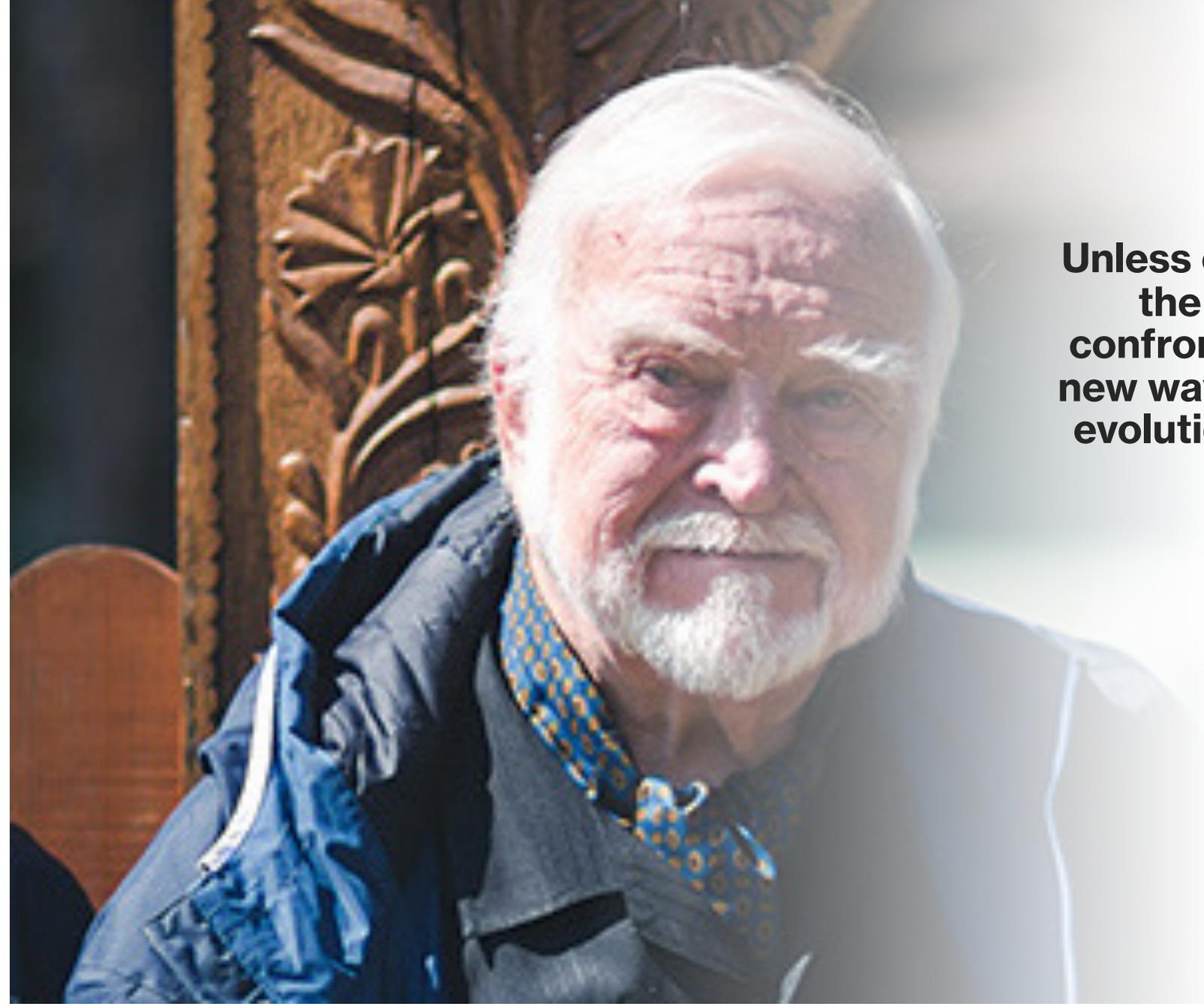
Unless enough people are motivated by the enjoyment that comes from confronting challenges, by discovering new ways of being and doing, there's no evolution . . . no progress in thought or feeling.

CHALLENGE

- **Challenge/skill balance**
- **Clear goals**
- **Immediate feedback**
- **Total concentration**
- **Self-control**
- **Loss of self-consciousness**
- **Loss of time consciousness**
- **Merging of awareness and action**
- **Intrinsic enjoyment**

Part II systems & strategies
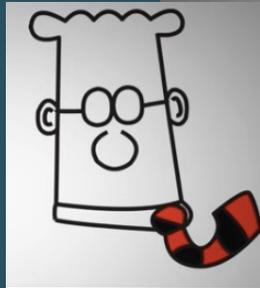
Scott Adams: How to Fail and Still Win Big
https://www.youtube.com/watch?v=fwcKTYvupJw

Mara

Setting goals was something I always thought I have been good at; however, I now realize that making a list of things I need to do with no clear direction or outline of how I am going to get it done is not goal-setting. Within these couple of weeks, my list of tasks I need to complete has built up to the point where it's overwhelming and I would rather just panic and complete everything at the last minute. Instead, I decided to try goal-setting to see by identifying what needs to be done and making a plan to carry it through, and if I would be successful. One of my biggest tasks was applying to graduate school. Opening the application was daunting but I found the majority of it to be fairly simple. Until the portion where they ask for my personal statement essay. I was totally stumped and started thinking about how to word my essay to be considered a top applicant for the program and I kept overthinking what to include and how it would affect my admissions results.

However, because I am working on goal-setting, I decided to chunk out the paper into five equal parts over the span of a week so I would not feel overwhelmed about completing the paper and so I had time to go back and review what I had written the previous day. Meeting my goal of one portion of the essay completed each day made me feel good and more capable of getting into the program of my choice because I was able to set times to be in a state of flow rather than continue working on the essay all at once and potentially falling victim to the default mode.

COMPLEX IS DIFFERENT FROM *COMPLICATED* (confusing, disorganized, chaotic, hard to figure out)

COMPLEXITY

Flow-nurturing environments combine both "work-like and play-like aspects of engagement" (Shernoff, Abdi, Anderson, & Csikszentmihalyi, 2014, p. 217).

Turner and Meyer's (2004) exploration of challenge-seeking in the math learning context argued, a challenging environment is a "high-press" environment motivating deeper understanding, mastery, and high standards for performance.

COMPLEXITY

INTEGRATION Support	DIFFERENTIATION Challenge
Collaboration	Self expression
Shared values and goals	Individuality and autonomy
Connections & Security	Asserting personal goals and desires
Care and support	Standing out from the crowd
Behavioral boundaries	

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"To keep enjoying something, you need to increase its complexity."

PRACTICAL FLOW SCIENCE

How could you and your students experiment with task design, feedback, success strategies, work processes, relationships?

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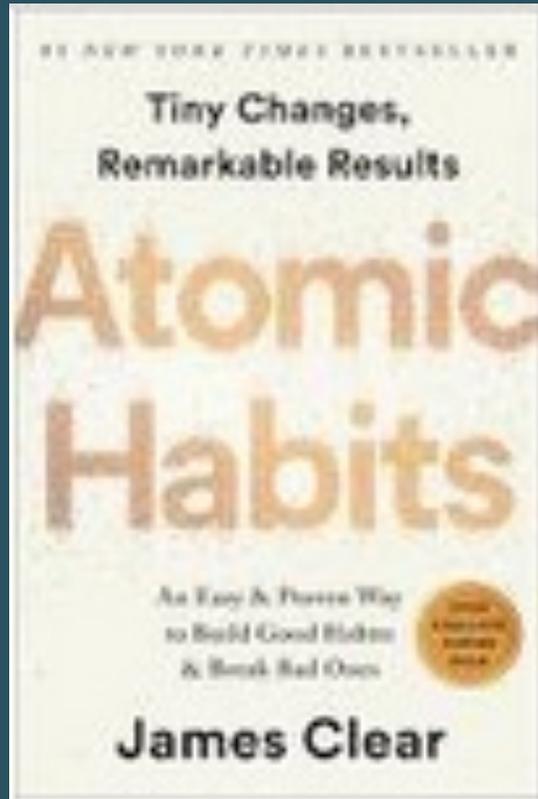
James Clear, Atomic Habits

- Strive for new and better ways to do things.

- Put the focus on building and refining skills that will contribute to long-term success — in meeting both chosen and unexpected challenges

"People may assume that large problems require "large" solutions. How could a brief psychological intervention make headway in the face of structural problems that contribute enormously to inequality and poor outcomes in education? To presage later arguments, psychological interventions do not replace traditional educational reforms but operate within the context of existing structures to make them more effective. Psychological interventions change students' mind-sets to help them take greater advantage of available learning opportunities.

This analysis draws on a core tenet of social psychology, namely, that every attitude and behavior exists in a complex field of forces — a "tension system" — in which some forces promote a behavior whereas other forces restrain that behavior (Lewin, 1952; Ross & Nisbett, 1991; Wilson, 2006). One lesson from this analysis is that the structure of the system determines its potential for change — an intervention that increases students' motivation to learn or that removes barriers to learning will improve academic outcomes only when learning opportunities exist in the educational environment."

Study	Student sample	Theoretical approach	Summary of randomized treatment and control group(s)	Summary of results	Effect on achievement
Attributions and implicit theories of intelligence					
Wilson and Linville (1982, 1985)	First-year college students struggling academically	Leading students to attribute academic setbacks to unstable factors rather than stable factors can motivate students to work harder and not give up after setbacks in school.	In one laboratory session, ostensibly as a part of a survey, students watched videos of upper-year students describing how their grades in college were low at first but improved over time. In a	One week later, students in the treatment condition performed better on a GRE exam. A year later, these students had earned higher college GPAs and were 80% less likely to have dropped out of college. The treatment effect on GPA appeared to	.27 grade points one year later

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Blackwell, Trzesniewski, and Dweck (2007)	Low-income, Black and Hispanic or Latino 7th-grade students at an urban school	Teaching students that people's core intelligence is malleable and grows with effort and challenge can motivate students to work hard and not give up after setbacks in school.	In 8 sessions over 8 weeks, students took part in workshops on study skills and the function of the brain and how the brain can get stronger when a person works on challenging tasks. Students in a control group learned only study skills.	At the end of the academic year, the normative decline in math grades exhibited by students in the control group was reversed such that students in the treatment condition had earned significantly higher math grades.	.30 grade points at the end of the school year

1

Reframe the Flow Dimensions as Principles of Learner-Centered Classroom/ Service Design

Fostering	Fostering Intense Concentration
Teaching	Teaching Skills Necessary to Meet Specific Challenges
Helping	Helping Learners Set Goals Based on Authentic Experience
Fostering	Fostering Learners' Sense of Autonomy & Control
Facilitating	Creating Opportunities to Translate Awareness into Action
Reducing	Reducing Learners' Self Consciousness/Fear of Failure
Downplaying	Downplaying Time Pressure
Cultivating	Cultivating Intrinsic Motivation: Creating Opportunities for Students to Enjoy the Process & Design their Own Systems
Exchanging	Exchanging Timely, Relevant Feedback

Experiment: Flow-Centered Training for Writing Coaches

FOSTERING INTENSE CONCENTRATION			
Project (Student 1) • Student received detailed assignment guidelines for a research paper and wanted help getting started. • Student had received negative comments on her prior paper from same instructor; prior appointment worked on her skills breaking down professor's comments and relating them to her writing.	**Coach's Observation on Flow Dimension** • Student would frequently begin asking a question and then get distracted and on a tangent. Her thoughts seemed random and disorganized. She became focused on minute details and tended to miss the big picture. • At first, the student was prompting me to write everything out for her. • When I asked open questions about what she wanted to focus on, she responded with vague "I don't knows" and "I guess/maybes."	**Strategy** • We turned discussion of ideas into actions by talking about the structure of a section and then writing it down. • I assisted her in structuring the first few sections and then asked her to use the same ideas for the other sections. • We set goals for her rough draft for our next appointment. We broke things down into smaller portions that were less intimidating.	**Outcome** • After working together to create a couple of examples, she began to take the reigns and write her own notes. • When I prompted her with more specific questions about her interests, she became animated and provided more detailed answers. • Once we developed a pattern for each paragraph and section, she became more engaged and focused. She was able to continue the pattern to finish an outline for her rough draft.
REDUCING SELF-CONSCIOUSNESS			
Project (Student 2) Teacher Education Program application	**Coach's Observation on Flow Dimension** Student felt awkward about "talking herself up;" was taking a wide rather than deep approach to two questions.	**Strategy** Asked student to explain relevance of specific lines; asked questions to establish goals for the content.	**Outcome** • Improved student confidence and comfort that revised sections were not bragging • Student showed ability to articulate difference between "shotgun" approach and evidence/analysis

ase select the flow dimension that appeared to have the greatest impact on the student's engagement with the writing task."

Table 9 Number of times each selected flow dimension was selected during the 2017 Academic Year

	Challenge/ Skill Balance	Clear Goals	Concentration	Perceived Self Control	Time Consciousness	Self Consciousness	Ability to Act on Feedback	
Spring 2017	233	214	112	165	93	139	161	**Total appointments 660**
Fall 2017	303	258	162	230	109	161	327	**Total appointments 642**

➢ **Helped coaches establish relationships that both *supported* and *challenged* student writers**
   Combined elements of hard work and high expectations with positive feedback and fun.

Helped reduce writing coach anxiety and self-consciousness
   Brought order and clarity to chaos while maximizing student autonomy.

Provided a holistic framework for gathering descriptive data (using the flow dimensions as coding categories)
   Helped us assess what one-on-one sessions accomplished.

Training writing coaches how to create engaging, student-centered, goal- and growth-oriented transactions; To teach *cognitive*, *emotional*, and *motivational* metaskills (See Sandra McGuire, *Teach Your Students How to Learn*)
   Set the expectation that every student can achieve higher levels of mastery and self-control, greater consciousness of the strengths they have and how to use them.

**Experiment:
Flow Journals in a
Developmental Writing
Class**

"Every time I'm in this class I'm
always checking the time.
I'm only here for fifty minutes,
but it feels like an eternity"

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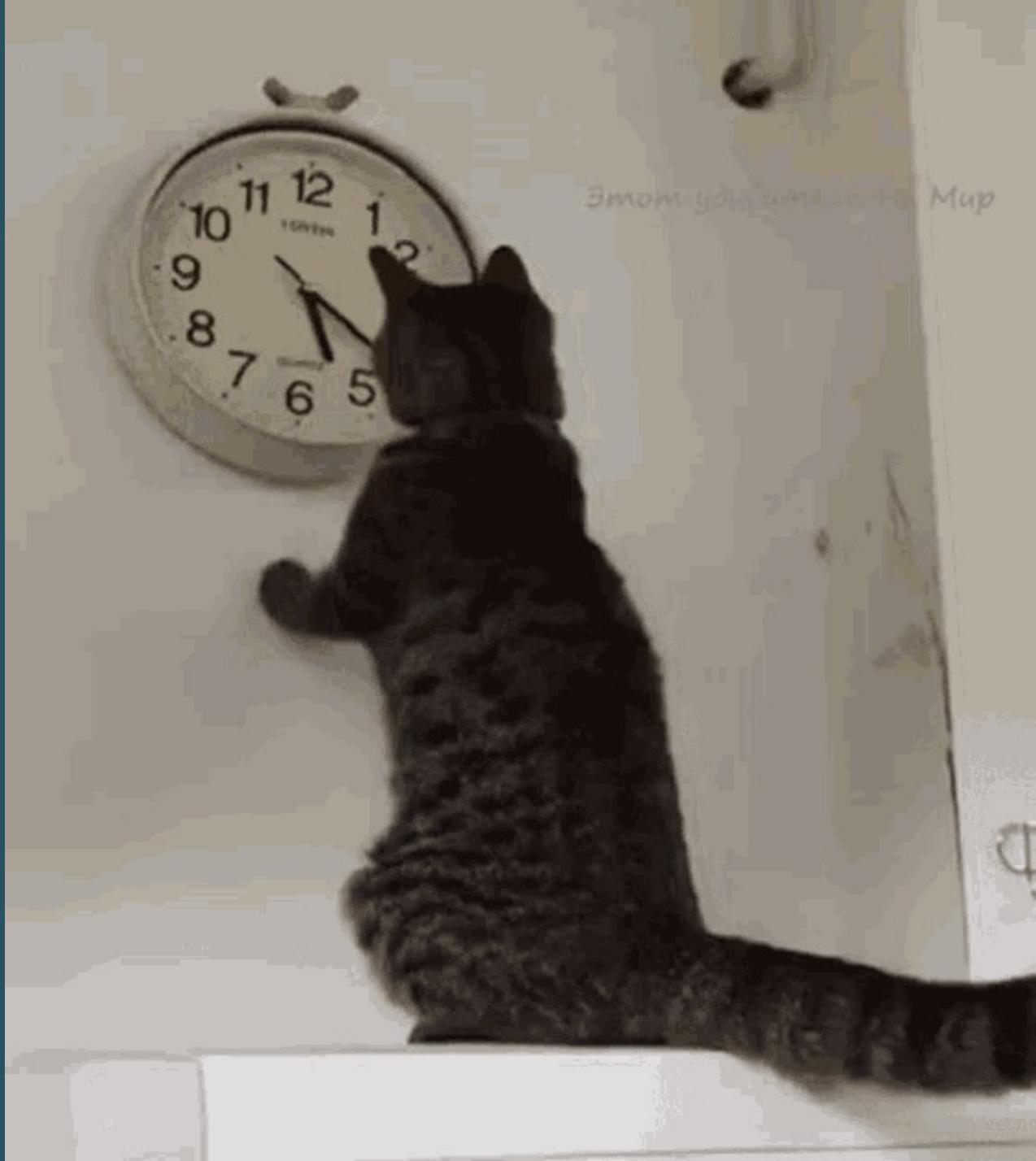
Self-Consciousness

"FRACTIONS!! Noo . . ."
(Math in Decision Making)

Self-Consciousness

As a senior in high school, I felt that I wouldn't be able to go to college with my ACT scores. I was a smart student, in the top 20% of my class and I took the ACT's four times and the outcome was the same every time. I was scared for myself and for my family. I had to go to college because of my sisters. My mother died at a young age and it's my responsibility to take care of them. I was the first out of my family to go to college and I didn't know if I was going to go or not. It was the scariest moment of my life. But then I started to get some acceptance letters for colleges everywhere. That was the best moment of my life.
(Intro. to Psychology)

Self-Consciousness

Even though I could hear and see what the professor is doing, my attention is not fully on him. Sometimes when I walk into the class, when I first take my seat, I would feel smart. But then as the class began my self-confidence drops because there're so many smart students in that class. I just feel like I don't belong or I'm not smart enough, if I'm even smart at all. (Intro. to Psychology)

Self-Consciousness

My classes are hard, and I feel really lonely. When I feel lonely I start feeling sad, angry, depressed and I just start crying. This is the only class, that when he is talking I'm thinking "I'm so lost, I don't know what he is talking about." I start feeling really depressed and anxious, because I start thinking that I'm not going to do good in this class . . . . I'm not used to feeling like this . . . if I don't get O.K. or good grades I feel devastated. (Business Analysis)

Self-Consciousness

I actually sat directly in the middle of the class room. It wasn't intentionally, but it was the only seat left. I kind of felt out-of-place because I sat between two white guys. I'm not a racist or anything. I'm just not used to it. They turned out to be cool guys. Anyway, the whole class hour I had sweaty hands because I didn't want him to call on me. (music appreciation)

Left Behind (control-of-attention challenge too high)

While I'm in my Intro. to Politics *I have problems focusing*, and also *taking notes*. He goes too fast and even though he explains everything good, he puts too much info out there to keep track of.

The classroom is usually quiet, only the teacher talks, and other than that you can hear the chalk pressing against the chalky black board very fast. The teacher writes so fast, I'm in class trying my hardest to copy down the notes and listen to what the teacher is saying at the same time. Trying to understand what is going on. Sometimes I find myself thinking of other things while taking notes.

He doesn't even ask us where . . . we left off last time or what were we doing. I don't know. I think he should say something in order for us to know that he is starting the lecture . . . He starts talking about linear and he says, "By this point of your life you should know how to come up with the equation . . .

We did some exercises from the book, but I only know how to do half of them. I'm really feeling really desperate. We are going to go over the answers once everyone is done. I don't understand why he expects us to know everything that he is going through in class.

Gute, D., & Gute, G. (2008). Flow writing in the liberal arts core and across the disciplines: A vehicle for confronting and transforming academic disengagement. *The Journal of General Education, 57*(4). DOI:10.1353/jge.0.0026

2

Use Informal Experience Sampling

Uncover sources of anxiety and boredom

Reveal specific gaps and errors in understanding

Uncover potential for understanding and clarity you wouldn't know about otherwise

A pen is a machine to think with.

Flow, 1990

Flow Journal
Poll Everywhere
Google Survey
Qualtrics
Exit Cards
Your Ideas?

3 Share a Realistic Map of the Territory in your Discipline or Service
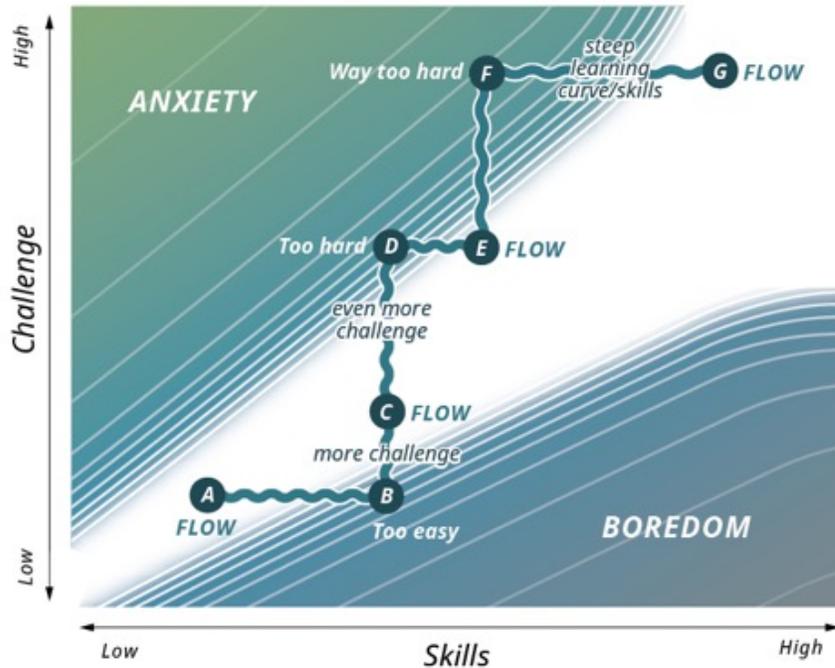
- Ask questions and facilitate opportunities for students to describe their challenges precisely

- Model how to calibrate and divide challenges

What is the real challenge?

At what point does your attention or confidence start to break down?

Is there anything else?

4

Facilitate Recycling Waste with the Right Raw Materials

What goes in comes out – transformed.
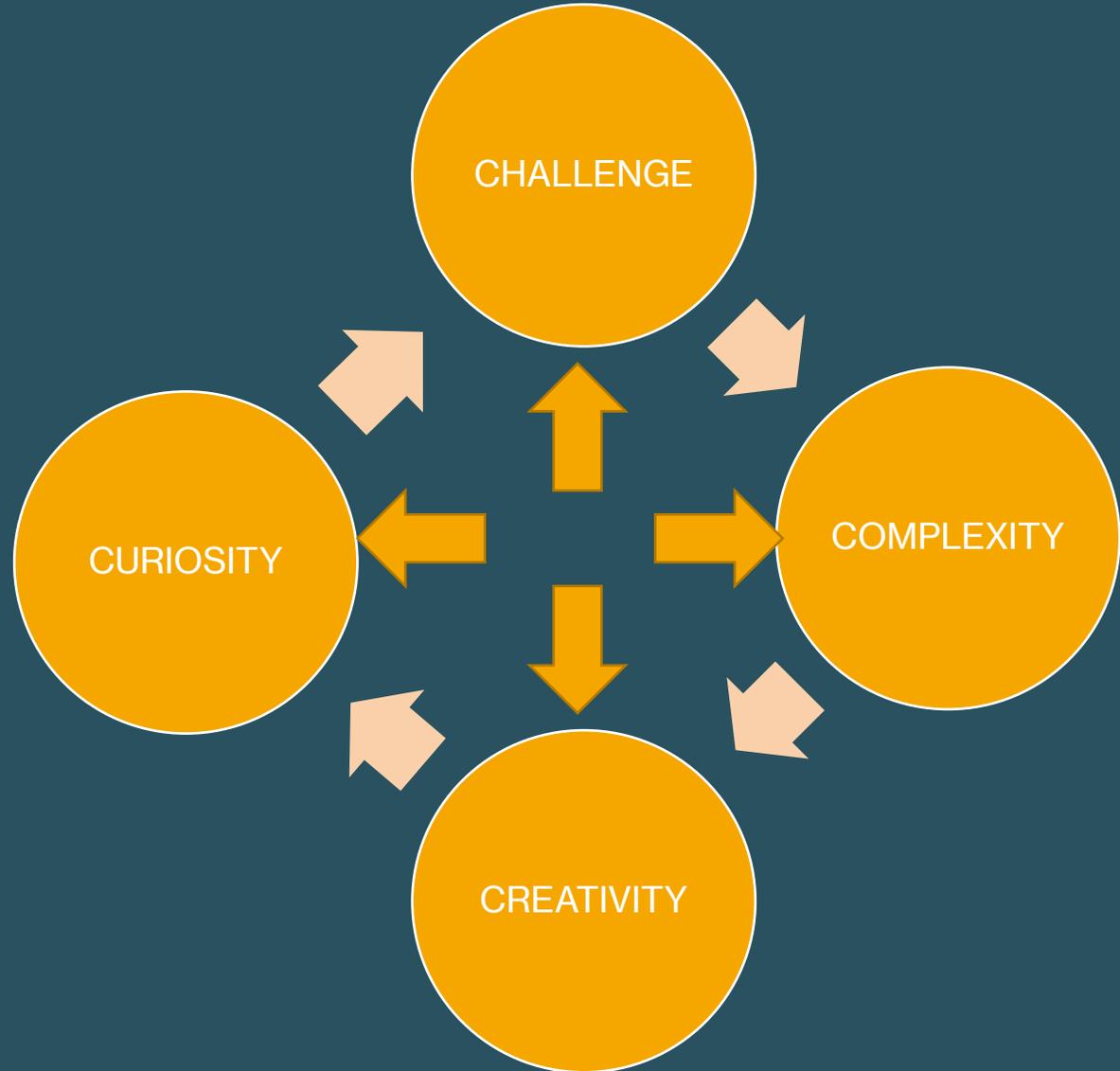
THE 4 C's of Flow
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CHALLENGE

CURIOSITY

COMPLEXITY

CREATIVITY
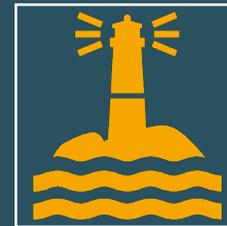
"If I fail on Monday, I'm going to try again on Tuesday . . . there are certain things you can figure out, weaknesses that were exposed. It sucks to lose, but at the same time, there are answers there if you just look at them. The process should be the same whether you win or lose."
(The Mind of Kobe Bryant: Love for the Game
https://www.youtube.com/watch?v=kEc4XdQayN4)

Simone Biles

"Walking away from the Olympic Games was a win . . . I know a lot of people thought I failed because they expected me to go out with five or six medals, but walking out of it was my biggest win."

Teen Vogue, 14 April 2022

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5

THE PHASES OF CREATIVE WORK
(Csikszentmihalyi, 1996)

Facilitate opportunities for students to learn that success comes from intense effort balanced by stepping away and relaxation. Make the most of the "mysterious time."

PREPARATION

ELABORATION

Struggle

INCUBATION/I"THE MYSTERIOUS TIME"

Recovery

Release

Flow

EVALUATION

INSIGHT
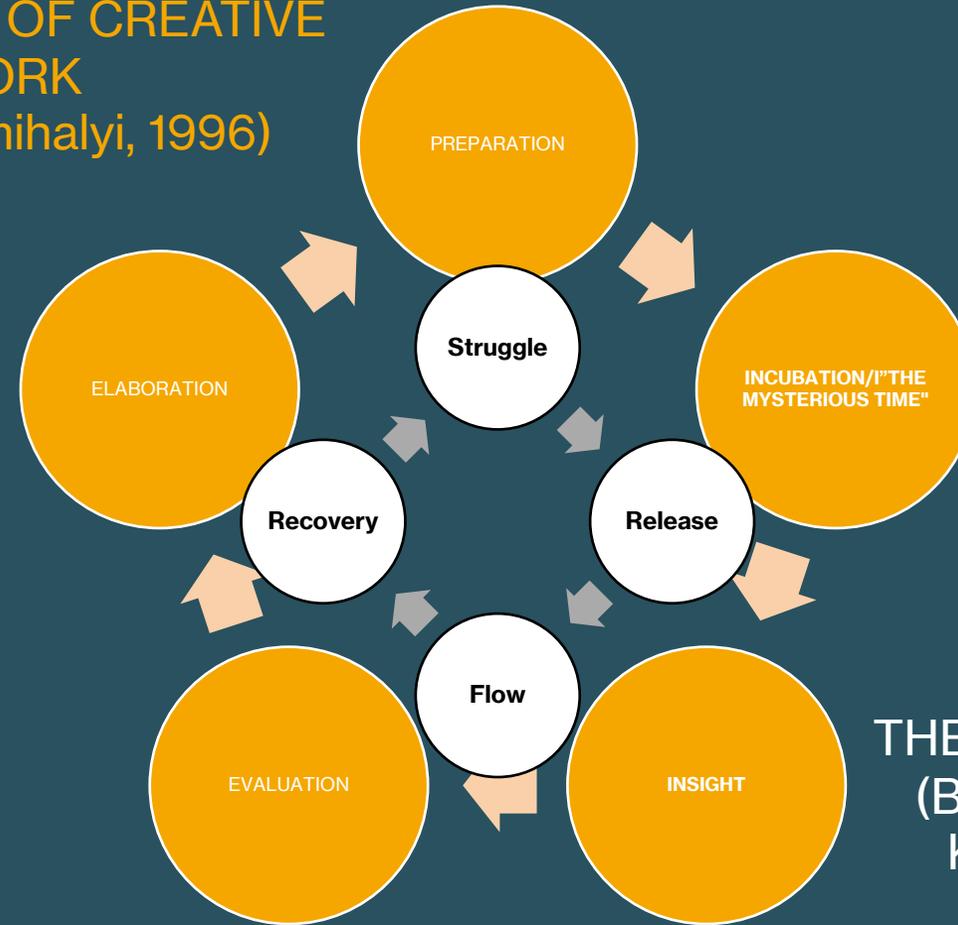
THE FLOW CYCLE
(Benson, 2004; Kotler, 2021)

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Functional Magnetic Resonance Imaging (fMRI)
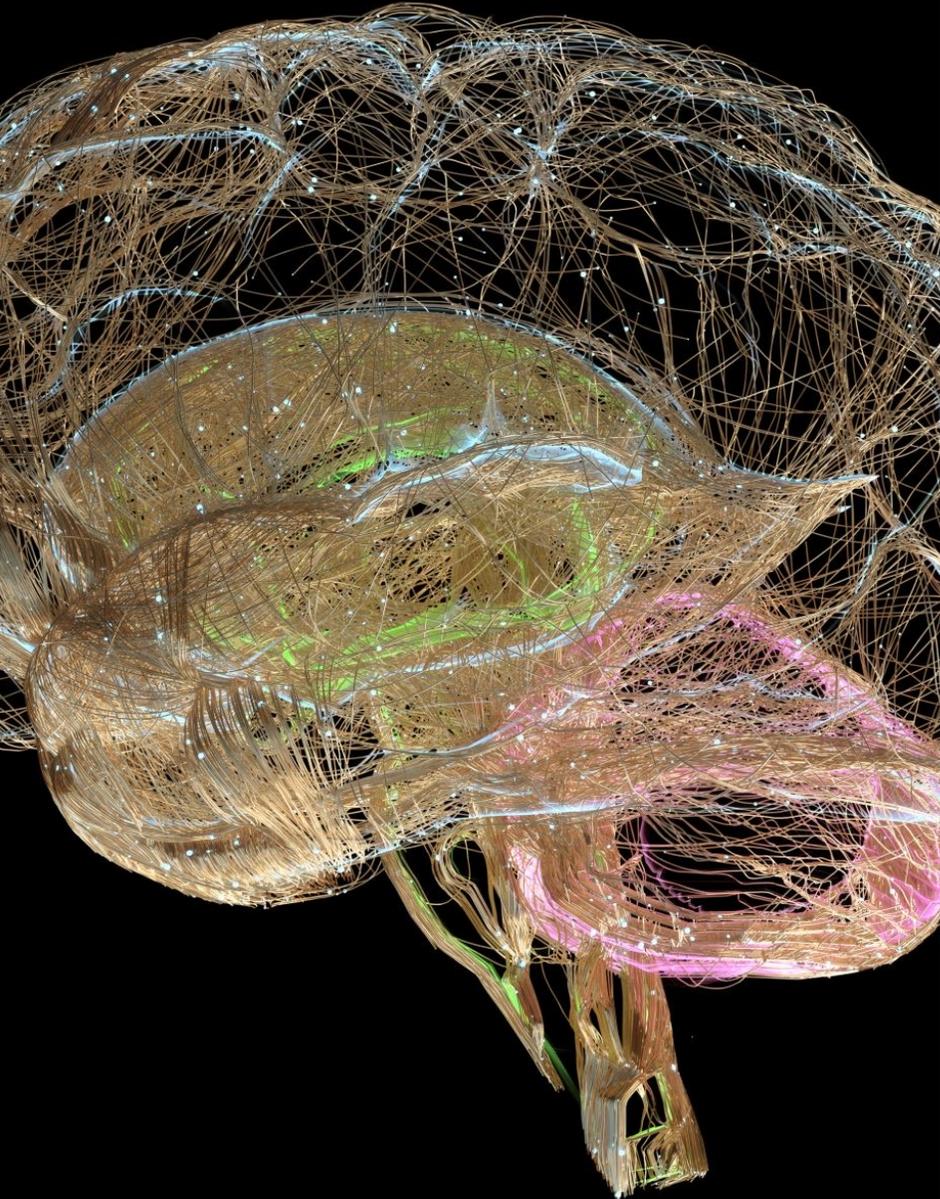
— 6 **Help students understand how to make their brains work in their favor**
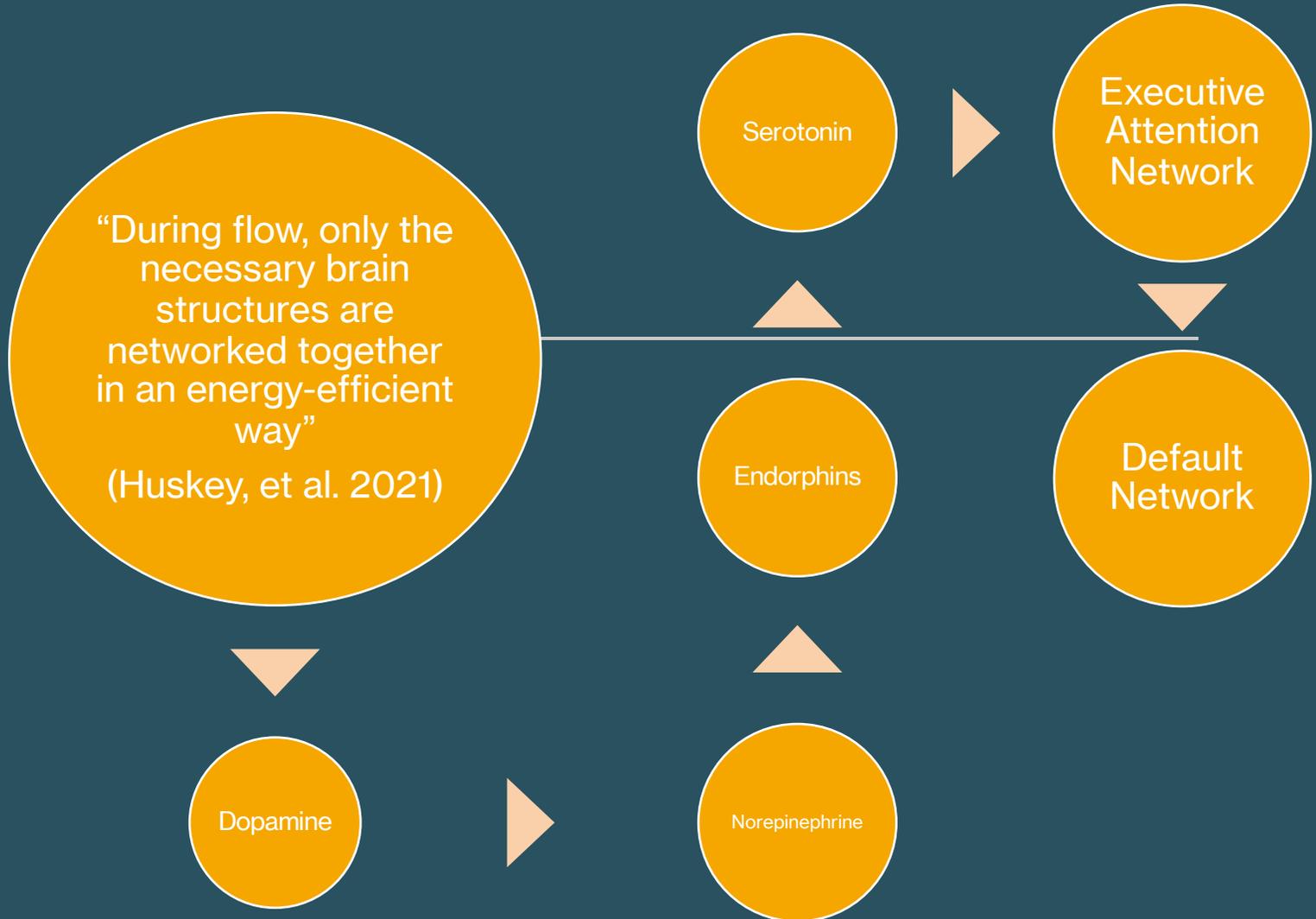
"During flow, only the necessary brain structures are networked together in an energy-efficient way" (Huskey, et al. 2021)

Serotonin

Executive Attention Network

Endorphins

Default Network

Dopamine

Norepinephrine

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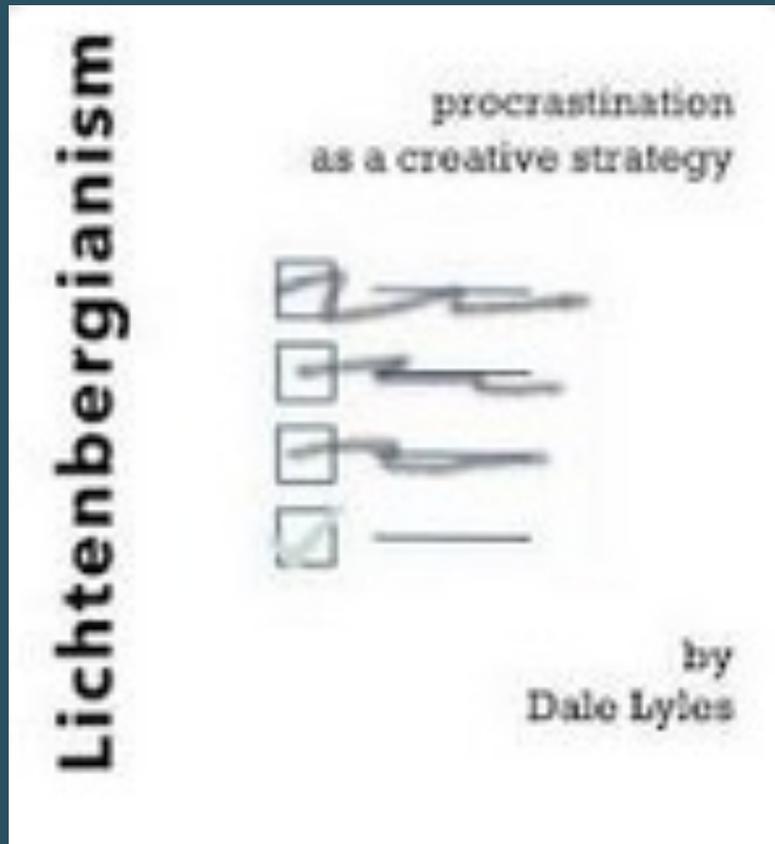
Karli

My experiment was to turn off all notifications on my computer and put my phone on silent mode, and away until I was finished working on assignments/studying. I would put them away and work, and other times I would leave them both near and on - so this way I could compare how much I got done during each time frame. In the PACS reading, I wanted my experiment to focus on the task avoidance feature where productive procrastination and the art of subtraction is mentioned. As I mentioned, I would take my phone and all distracting notifications out of the way when I was working on my academics. I found that when they were out of the frame, I would be more invested and concentrated on what I was doing,

When I had technology out and notifications turned on, I was much more distracted and easily swayed to check everything that popped up - which in turn caused me to complete assignments much longer than when they were put away. I think the experience was important for me to view first hand how distracting technology is when it's right in front of you, because I definitely could have finished certain tasks much faster if my phone was put away.

Sydney

The experiment I tried was to control distractions by using a reward system. For one day, I introduced the reward of a Reese's peanut butter cup after finishing a homework assignment or reading. I decided to try this experiment because, in the reading they talked about the link between the activation of the reward system in your brain and the activation of flow. I was hoping that by activating my brain's reward system, I might be able to keep myself focused for longer periods of time. The results of the experiment was that introducing rewards was moderately helpful in maintaining focus. As a person with ADHD, I thought it might be particularly helpful for me to have a reward for maintaining focus, but I still found myself distracted or rushing through the assignment/reading in order to get the reward. Overall, it was not very effective in reducing distractions. However, it was helpful in that it enabled me to sit and work on homework for a longer period of time.

Sydney

The second experiment I did comes from the *Creativity* reading and the goal of the experiment was to prevent burnout. I was working on a coding project and got stuck. Instead of trying to sit and force a solution, I took this time to try out my experiment, the incubation period. I decided I would wait a minimum of two days before sitting down and attempting the coding project again. I would take the time in those two days to not consciously think about the project, just letting it simmer in my subconscious. I was at work the next day when I suddenly had the "Aha!" moment and figured out the solution to my coding problem. I conducted this experiment, because it was highly supported in the reading. It would increase parallel processing, which is where original connections that the rational mind would reject have the opportunity to become established ideas. It would also allow my brain to make new associations, because my conscious brain is not censoring anything. Overall, this experiment in incubation was incredibly helpful. If I had stayed and continued working on this project, I likely would have gotten frustrated and given up. Instead, I was able to take time away to prevent frustration, figure out the answer, and not experience burnout.

Sydney

The third experiment was actually unplanned, and it comes from *PACs*, concerning ritual and transforming something negative into a positive. As stated, this experiment was unplanned, but while working on a drawing, I noticed that my drawing was not centered on the page. It was skewed to the right. I was just about to start erasing everything and start all over, when I had an idea come from nowhere. Instead of redoing everything, I could purposely skew everything to the right. The reason I followed through with this idea was due to the "Numen/Connection" section of the *PACs* reading. It said to listen for ideas that come from nowhere and to follow your impulses. I did, and instead of being irritated and unhappy that my drawing was not centered, I ended up turning this negative into a positive, by purposefully skewing the rest of the drawing. By keeping my mood in a positive state, I was able to keep my creativity flowing and continue work on my drawing.

Envision a time you were just learning your current discipline, or something you're trying to master right now where you're experiencing some friction/struggle. What is it? How precisely do you feel in those moments?

7

Exploit the Power of Experience *Sharing*/Modeling

- **Communicate that within your discipline, challenge is normal and growth is possible**

- **Share the specifics of your own setbacks and how you've dealt with them**

- **Help them anticipate and navigate the unique challenges of the assignment**

- **Help students use *themselves* as role models!**

Coulson, F. (2019). Learning from at-risk college students who participate in flow activities. [Doctoral dissertation, Capella University]. www.proquest.com/docview/2355994854?pq-origsite=gscholar&fromopenview=true

- Links between flow activities and managing anxiety /boredom

- Description of how the students experience each flow dimensions

- Students' analysis of possible ways they could transfer their strengths in controlling time and attention from the "autotelic" flow activity to academic activities

- Creation of game-like study strategies

"Yeah, like the effort and like the perseverance, definitely, I think can definitely be applied to my studies."
"If I can do something to give myself immediate feedback while studying, that can also improve how well I perform."
"I've never really put down how I've used my time before in such a detailed manner; I've done charts and stuff before, but you tend to notice patterns, a lot of self-reflection too comes through this."
"There are a lot of characteristics of the things that I do and the effort I put into them that would be very helpful in my studies."

Control your Attention, Control the Quality of Your Life.

"If you are interested in something, you will focus on it, and if you focus attention on anything, it is likely that you will become interested in it. Many of the things we find interesting are not so by nature, but because we took the trouble of paying attention to them."

Mihaly Csikszentmihalyi, *Finding Flow: The Psychology of Engagement with Everyday Life*

Find rewards in the events of each moment. If a person learns to find meaning in the ongoing stream of experience, in the process of living itself, power is returned to the person.

Part III   possibilities
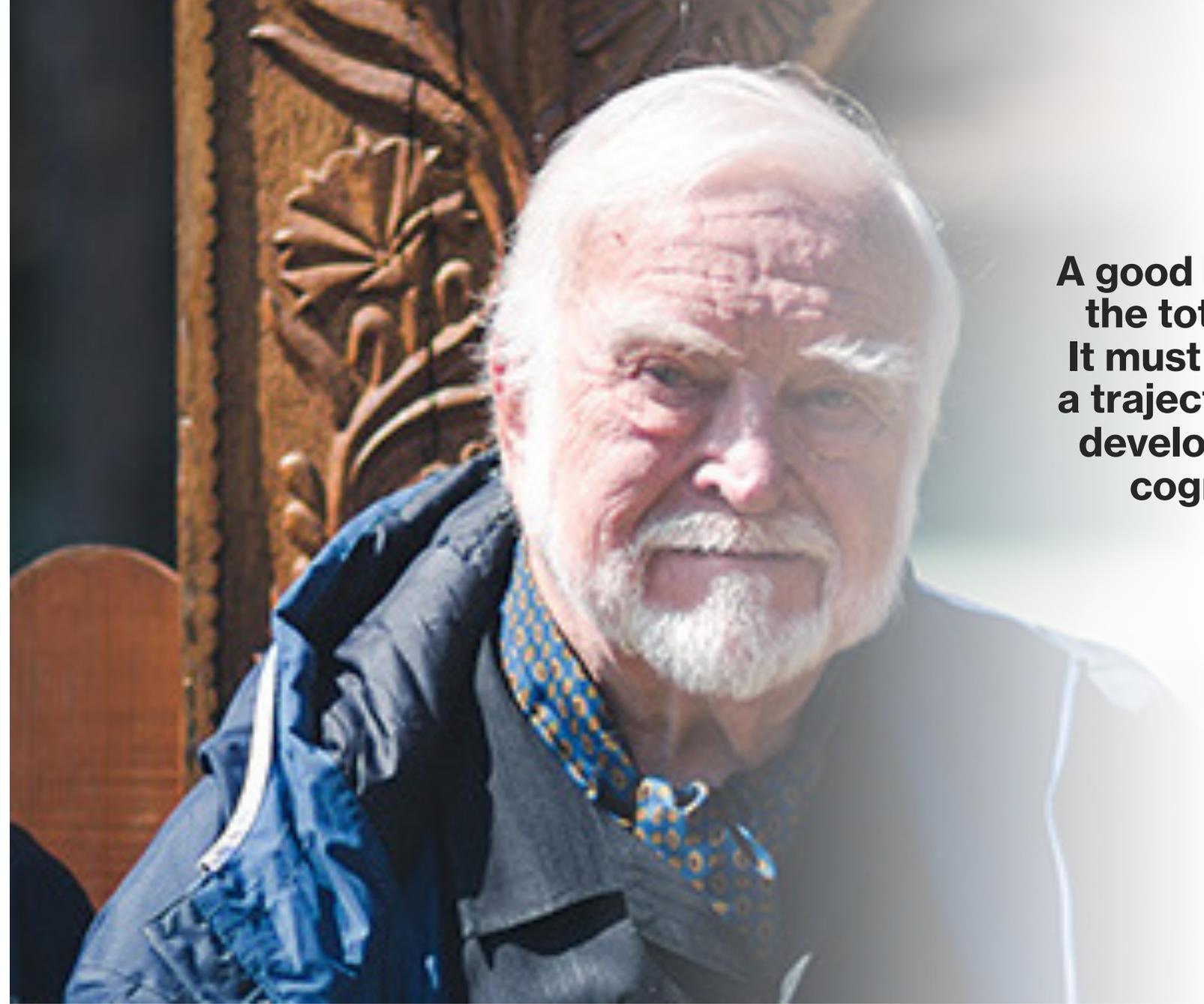
A good life consists of more than simply the totality of enjoyable experiences. It must also have a meaningful pattern, a trajectory of growth that results in the development of increasing emotional, cognitive, and social complexity.

COMPLEXITY

"Complex life forms depend for their existence on a capacity to extract energy out of entropy, to recycle waste into structured order."

Help Students See Themselves as Transformers:
Recycling the Forces of Disorder into Something They Can Use

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Coulson, F. (2019). Learning from at-risk college students who participate in flow activities. [Doctoral dissertation, Capella University]. www.proquest.com/docview/2355994854?pq-origsite=gscholar&fromopenview=true

"The students would then be able to think about moving their "I can't" thinking to "I can."

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Just got done with Lab and it went pretty good because I followed the instructions that you gave me . . . and used the double note. I put the Terms on one side of the paper and . . . on the other what would help me remember them. For example there is a type of fligi and the way I remember it is because it looks like a white umbrella . . . This triggered something for me because . . . it really helped me once again to understand the terms. (**Biology**)

"The flow journal affected my ability to overcome fear. I had never expressed my true feelings about my education in such form before. I had a fear of talking about my future and education. This flow journal idea made it better for me to express how I feel on paper. For example, my math course seemed very difficult and I didn't want to talk about it because of my fear of looking stupid. "

"I procrastinated on some of the flow journal entries because they forced me to face my problems and difficulties and figure out how to fix them. This stressed me because usually the sciences come easy for me, and this did not seem to be the case. I was out of my comfort zone and that scared me."

"To keep enjoying something, you need to increase its complexity."

PRACTICAL FLOW SCIENCE

How could you and your students experiment with task design, feedback, success strategies, work processes, relationships?

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