Increasing Student Motivation: Strategies That Work

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Motivation

"Motivation refers to the ***personal investment*** an individual has ***in reaching a desired state or outcome***.

(Ambrose et. al, 68)

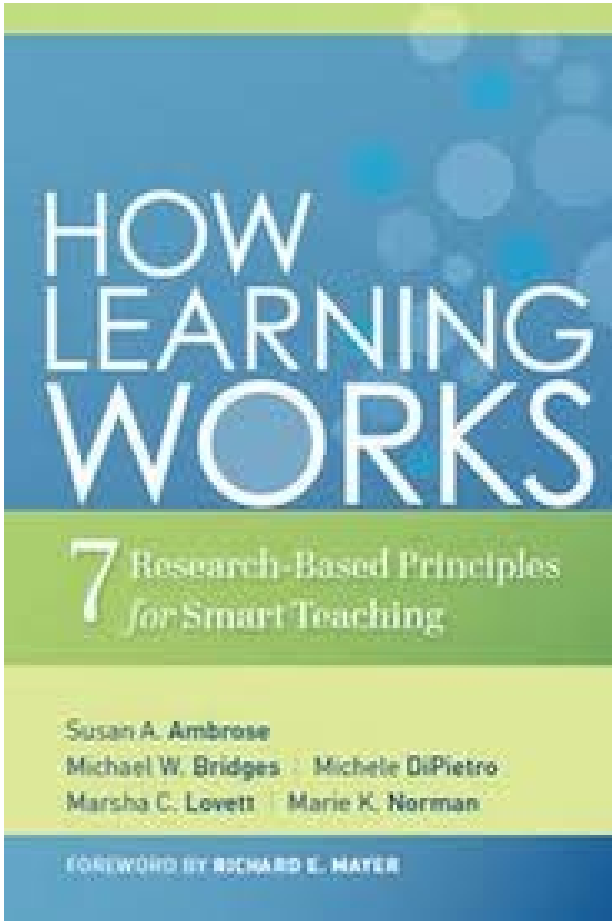
"In the academy, the term 'motivating' means ***stimulating interest in a subject*** and, therefore, the ***desire to learn it***."

(Nilson, 57)

Why Is It Often Difficult to Motivate Students?

Characteristics of many students:

- ***Impacted by COVID***
- **Working more hours**
- **More diagnosed ADHD**
- **Interested in obtaining credentials**
- **Feel entitled to an A or B if they consistently attend class**
- **Few time management skills**
- **Few learning skills**



Ambrose, S.A., Bridges, M.W., DiPietro, M., Lovett, M.C., Norman, M.K. (2010) ***How Learning Works: Seven Research-Based Principles for Smart Teaching.*** **San Francisco, CA: Jossey Bass.**

Three Important Levers that Influence Motivation

- ***Value*** **– the importance of a goal (attainment, intrinsic, instrumental)**
- ***Supportive Nature of the Environment*** **– the instructor is approachable, support is available from peers and others**
- ***Efficacy Expectancies*** **– the belief that one is capable of identifying, organizing, initiating, and executing a course of action that will bring about a desired outcome**

Ambrose et al., 80

Motivation Principles

- **Students' motivation generates, directs, and sustains what they do to learn**

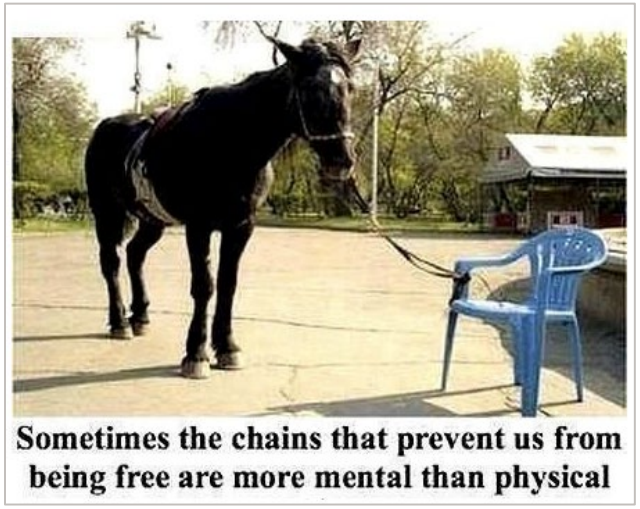
- **Concepts important to understanding motivation*:*** ***subjective value of a goal*** **and the** ***expectation for successful attainment of the goal***

Ambrose et al., 69

Learned Helplessness*

Based on prior experience, the feeling that no amount of effort will bring success

Destroys motivation to attempt a task



*Martin Seligman and Steven F. Maier

What are some of the causes of learned helpless in our students?

Remediation of Learned Helplessness Requires That We:

- Understand the causes
- Help students understand the distorted beliefs and misperceptions that are causing their current deficits
- Provide students the tools to change their behavior and refute their distorted beliefs

The Cure for Learned Helplessness

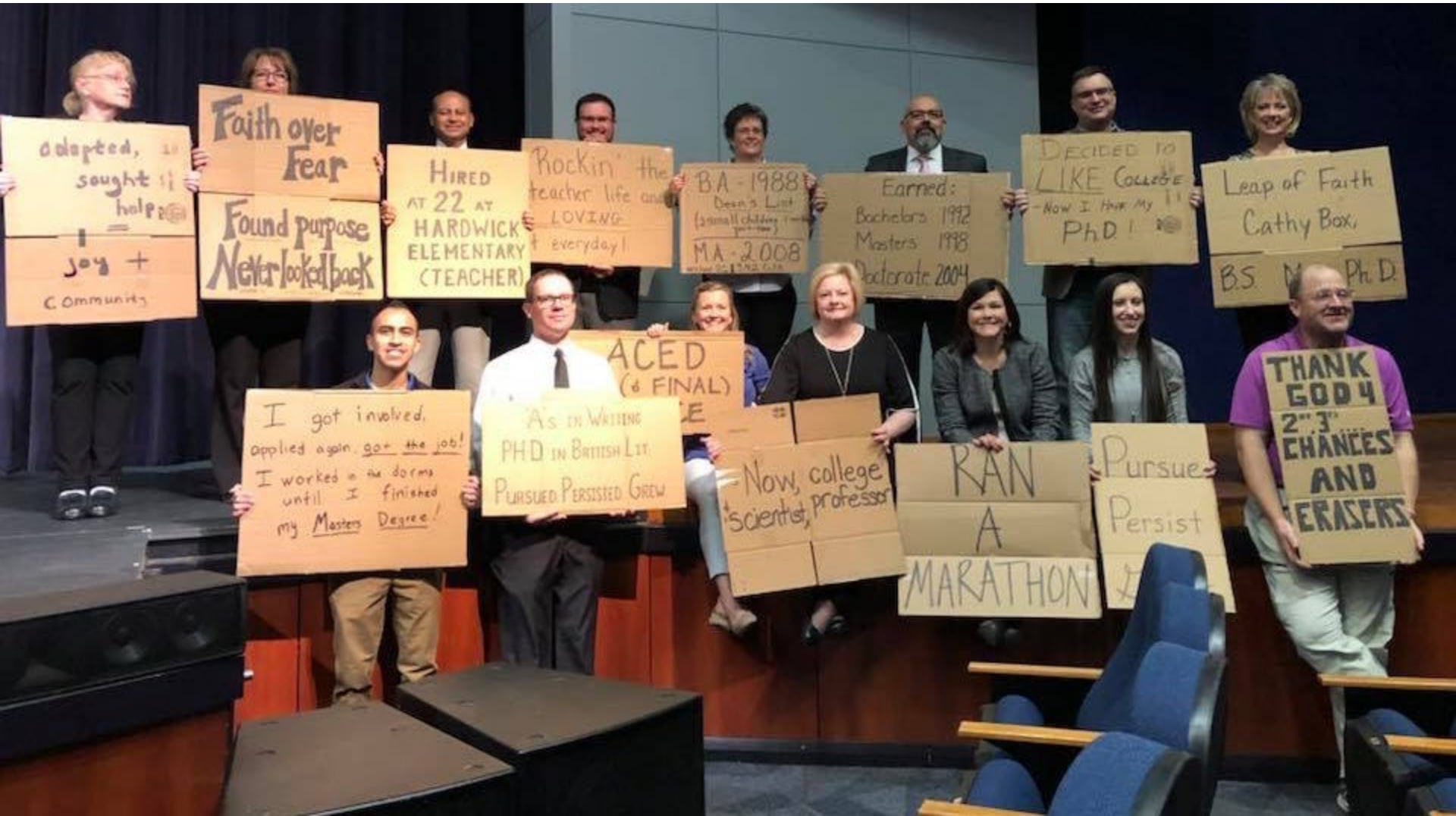
- **Understanding your "explanatory style"**
  To what do you attribute failure or success?
- **Changing the negative, self-destructive things you say to yourself when you fail**
- **Making the new statements a permanent part of your explanatory style**
- **Recognizing that *perception of ability has the most influence on the amount of effort* you will expend on a task!**

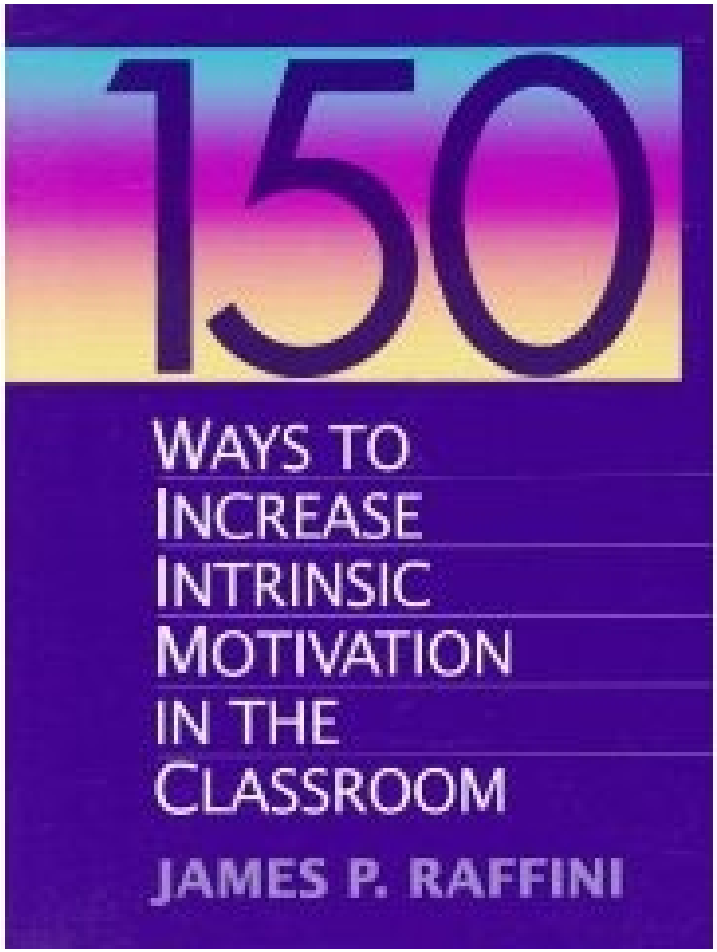
Ways to Create A Supportive Environment

- Introduce engaging, fun activity if possible.
- Emphasize the importance of effort, rather than prior experiences, in performance
- Demonstrate confidence that every student can succeed!
- Show the instructor/tutor's human side – hobbies, past academic struggles, etc.

Lubbock Christian University
Faculty Obstacles, Barriers, Failures

How Lubbock Christian University Faculty Overcame Struggles





Raffini, James P. (1995) *150 Ways to Improve Intrinsic Motivation in the Classroom.* New York, NY: Allyn and Bacon.

Five Bases of Intrinsic Motivation

- **Autonomy (Control One's Own Destiny)**
- **Competence (Do Things that Help One Feel Successful)**
- **Belonging (To Feel Part of a Group Effort)**
- **Self-Esteem (To Feel Good About Who They Are)**
- **Involvement and Enjoyment (To Find Pleasure in What They Do)**

James Raffini, Allyn and Bacon, 1995

Strategies for Enhancing Competence

- **Clearly articulate expectations**
- **Provide Early Success Opportunities**
- **Discuss the way many students explain success and failure – *attribution theory***

  (e.g. success attributed to luck or ability, rather than effort; failure attributed to lack of ability or factors beyond their control, rather than lack of effort)

More Strategies for Enhancing Competence

- **Provide Targeted Feedback**
- **Describe Effective Learning Strategies**

  Introduce Metacognition and Bloom's Taxonomy
- **Show Before and After scores**

Metacognition Revisited

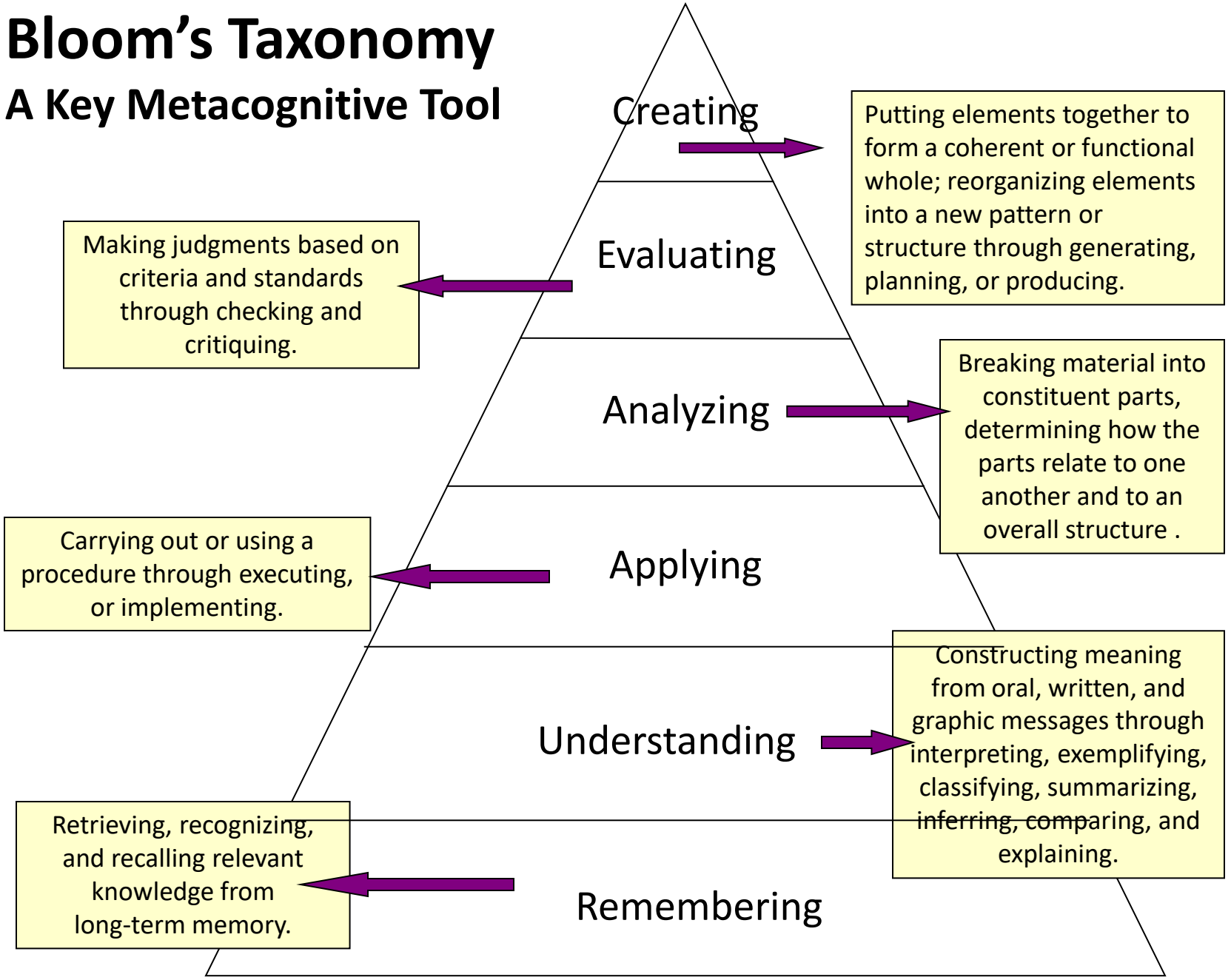
The ability to:

- think about your own thinking
- be consciously aware of yourself as a problem solver
- monitor, plan, and control your mental processing (e.g. "Am I *understanding* this material, or just *memorizing* it?")
- accurately judge your level of learning
- know what you know and what you don't know

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), The nature of intelligence (pp.231-236). Hillsdale, NJ: Erlbaum

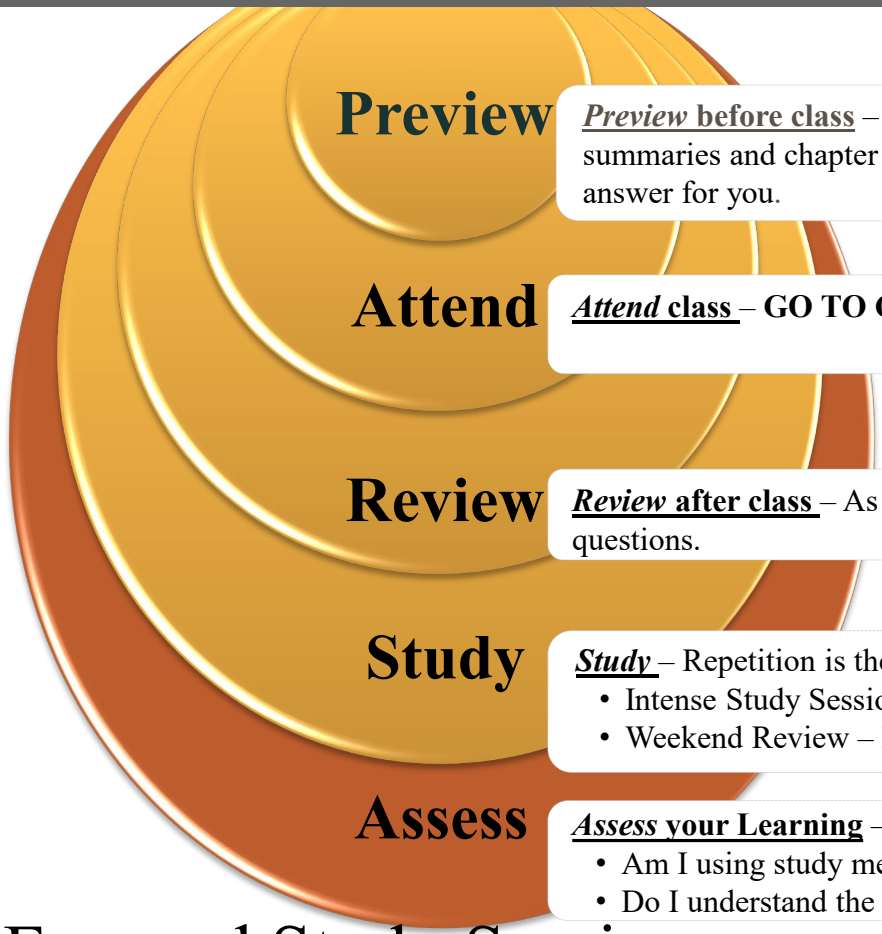
Bloom's Taxonomy

A Key Metacognitive Tool



http://www.odu.edu/educ/llschult/blooms_taxonomy.htm·

The Study Cycle



Preview

***Preview* before class** – Skim the chapter, note headings and boldface words, review summaries and chapter objectives, and come up with questions you'd like the lecture to answer for you.

Attend

***Attend* class** – **GO TO CLASS!** Answer and ask questions and take meaningful notes.

Review

***Review* after class** – As soon after class as possible, read notes, fill in gaps and note any questions.

Study

Study – Repetition is the key. Ask questions such as 'why', 'how', and 'what if'.

- Intense Study Sessions* - 3-5 short study sessions per day
- Weekend Review – Read notes and material from the week to make connections

Assess

***Assess* your Learning** – Periodically perform reality checks

- Am I using study methods that are effective?
- Do I understand the material enough to teach it to others?

Focused Study Sessions

1	**Set a Goal**	1-2 min	**Decide what you want to accomplish in your study session**
2	**Study with Focus**	30-50 min	**Interact with material**- organize, concept map, summarize, process, re-read, fill-in notes, reflect, etc.
3	**Reward Yourself**	10-15 min	**Take a break**– call a friend, play a short game, get a snack
4	**Review**	5 min	**Go over what you just studied**

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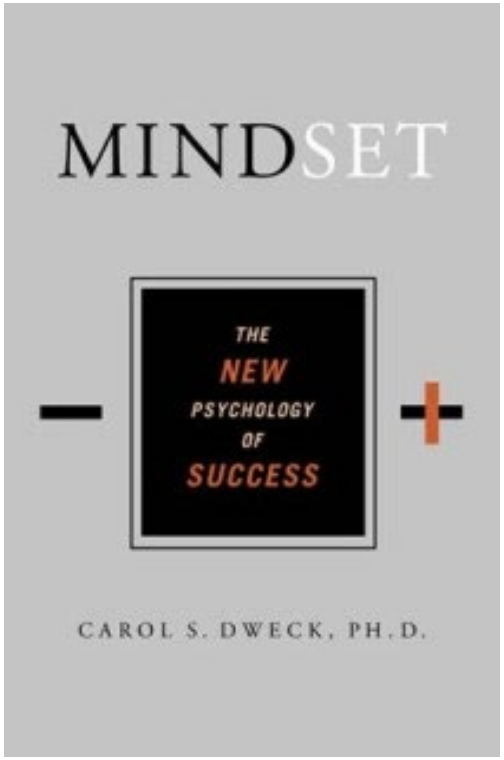
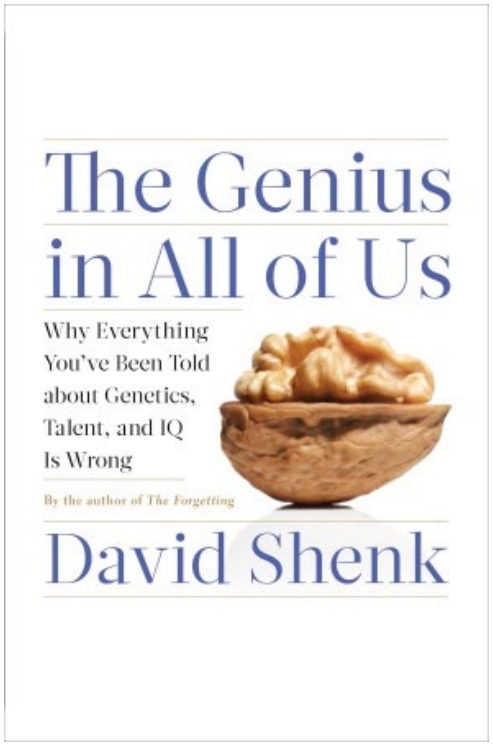
Before and After Scores Change Mindsets

- Robert, freshman chemistry student
  42, 100, 100, 100 A in course
- Michael, senior pre-med organic student
  30, 28, 80, 91 B in course
- Miriam, freshman calculus student
  37.5, 83, 93 B in course
- Ifeanyi, sophomore thermodynamics student
  67, 54, 68, 95 B in course
- Terrence, junior Bio Engineering student
  GPA 1.67 cum, 3.54 (F 03), 3.8 (S 04)

Mindset Impacts Motivation



Dweck, Carol, 2006. *Mindset: The New Psychology of Success.* New York: Random House Publishing



Shenk, David, 2010. *The Genius in All of Us: Why Everything You've Been Told About Genetics, Talent, and IQ Is Wrong.* New York: Doubleday

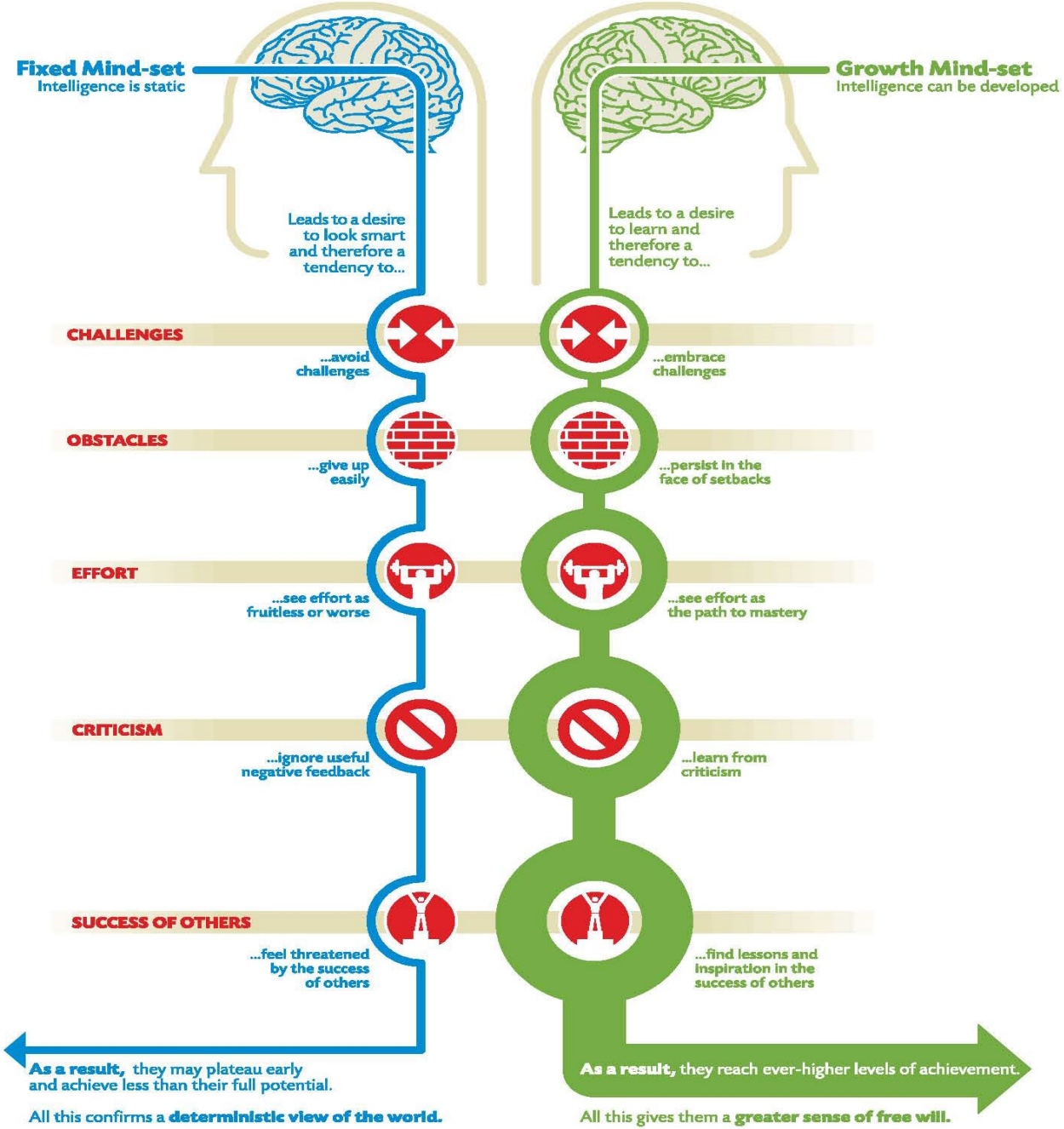
Two Different Mindsets About Intelligence

- **Fixed Mindset**
  - Intelligence is static
  - You have a certain amount of it
- **Growth Mindset**
  - Intelligence can be developed
  - You can grow it with actions

Dweck, Carol (2006) *Mindset: The New Psychology of Success.* New York: Random House Publishing

Responses to *Many* Situations are Based on Mindset

	Fixed Mindset Response	Growth Mindset Response
Challenges	*Avoid*	*Embrace*
Obstacles	*Give up easily*	*Persist*
Tasks requiring effort	*Fruitless to try*	*Path to mastery*
Criticism	*Ignore it*	*Learn from it*
Success of Others	*Threatening*	*Inspirational*


Fixed Mind-set
Intelligence is static
Growth Mind-set
Intelligence can be developed
Leads to a desire to look smart and therefore a tendency to...
Leads to a desire to learn and therefore a tendency to...
CHALLENGES
...avoid challenges
...embrace challenges
OBSTACLES
...give up easily
...persist in the face of setbacks
EFFORT
...see effort as fruitless or worse
...see effort as the path to mastery
CRITICISM
...ignore useful negative feedback
...learn from criticism
SUCCESS OF OTHERS
...feel threatened by the success of others
...find lessons and inspiration in the success of others
As a result, they may plateau early and achieve less than their full potential.
All this confirms a deterministic view of the world.
As a result, they reach ever-higher levels of achievement.
All this gives them a greater sense of free will.
GRAPHIC BY NIGEL HOLMES

Email from a General Chemistry Student with a Fixed Mindset

"…Personally, I am not so good at chemistry and unfortunately, at this point my grade for that class is reflecting exactly that. I am emailing you inquiring about a possibility of you tutoring me."

April 6, 2011

"I made a 68, 50, (50), 87, 87, and a 97 on my final. I **ended up earning a 90 (A) in the course**, **but I started with a 60 (D)**. I think what I did different was make sidenotes in each chapter and as I progressed onto the next chapter I was able to refer to these notes. ***I would say that in chemistry everything builds from the previous topic.***

May 13, 2011

Semester GPA: 3.8

Email received 6/3/2019 from Dr. Casey terHorst

Department of Biology, California State University Northridge

Hi Dr. McGuire-

We met briefly a few years ago when you were at CSUN. I was really moved by the talk you gave about doing a metacognition intervention. Since then, I've been using your intervention in my Intro Biology class every year. The students **respond really well** and **find it motivating**. But even if there were no other benefit to it, this recent story from a student makes it totally worth it for me...

I have a student in my Bio106 class who took the same class with me in the past and failed. …she is retaking the course with me and she told me that the… intervention hit home with her. In particular, she latched onto **growth mindset and quit thinking that she was "bad at biology".** That must have worked because **she had the third highest grade on the final exam and will get an A in the course**...

Dr. Casey terHorst's email continued

But it gets better. She just told me this story.

She is also taking Intro Physics and didn't study for the first exam and didn't do well. The instructor returned her test with "DROP?!" written in red on the front... **BUT with her new growth mindset, she decided she was good at physics too and she ended up with a B in that class too**. I had to wipe away tears as she was telling me this.

So...I keep trying to quantify the effects of all these things with the right metrics, etc., but even if it's just that one story, it's worth it.

David Hall, BA in Psychology, May 2019

Westmont College, Santa Barbara, CA

Final Semester GPA: 4.00

(2.70 cum before using strategies; ≥ 3.20 each semester after using strategies; 3.05 final cum GPA)

Currently pursuing MA in Clinical Psychology
at Pepperdine University
3.9 Cumulative GPA

Teach Yourself How to Learn vs Success Course

Email received from David Hall on May 11, 2019

…more than anything your book gave me **a structured way to approach studying strategically** while that class …didn't really resonate with me. It wasn't a very difficult class and it was easy to pass with a good grade, but I didn't leave that class with any tools that really gave me the structure and insight that I needed to actually put study strategies into practice. Your book and the examples you laid out gave a **very clear and concise methodology** that I was able to "plug in to," whereas that class **didn't impress upon me my own ability** to be able to study well. Your book and the examples you used and case studies you presented **inspired me to believe that if it were possible for them, it was possible for me too!!!**

Strategies for Enhancing Belonging and Relatedness

- **Create a community of scholars in the classroom where students are accountable to each other**

  e.g. Team based learning

- **Provide authentic, real world scenarios**

  Service-learning

Strategies for Enhancing Self-Esteem

- **Have students share answers to:**

  What is one thing do you do very well? How did you learn to do it well?

  How can you relate this to academic success?

- **Identify an appropriate level of challenge**
- **Provide Early Success Opportunities**

Strategies for Enhancing Involvement and Enjoyment

- **Introduce Engaging and Fun Activities**
- **Connect to Students' Interests**
- **Switch Days (Student becomes teacher; teacher becomes student)**
- **Reduce Student Anxiety**
- **Use Strategies from Skip Downing at** www.oncourseworkshop.com

Teacher's Role in Student Motivation

Eric Hobson, Albany College of Pharmacy

Positive Motivation	
Teacher's attitudes	27%
Course structure	22%
Intrinsic	20%
Course content	17%
Performance meas.	10%
Financial	1%
Parents/Others	1%

Negative Motivation	
Teacher's attitudes	32%
Course structure	26%
Learning environ.	13%
Course content	11%
Intrinsic	10%
Parents/Others	1%
Financial	0.3%

We *can* significantly increase student motivation by…

- Teaching students they can make themselves smarter by spending time on the material
- Testing early and often, providing early opportunities for success
- Conduct a class session (or some time in a tutoring session) on the importance of metacognition
- Express our confidence that *every* student can succeed
- Introducing a metacognitive get-acquainted activity during the first class/tutoring session

Reflection Activity

- What was the most interesting/novel information in this presentation?
- Using the information we've discussed in the in this session, describe how you might implement it in any aspect in your course(s)
- Share this activity with one or more colleagues

References

Ambrose, S.A., Bridges, M.W., DiPietro, M., Lovett, M.C., Norman, M.K. (2010) *How Learning Works: Seven Research-Based Principles for Smart Teaching*. San Francisco, CA: Jossey Bass.

Flavell , J. H., (1979) Metacognition and Cognitive monitoring: A New Area of Cognitive-developmental Inquiry. *American Psychologist*, 34 (10), (906-911).

Hobson, Eric (2001) Motivating Students to Learn in Large Classes. Unpublished manuscript.

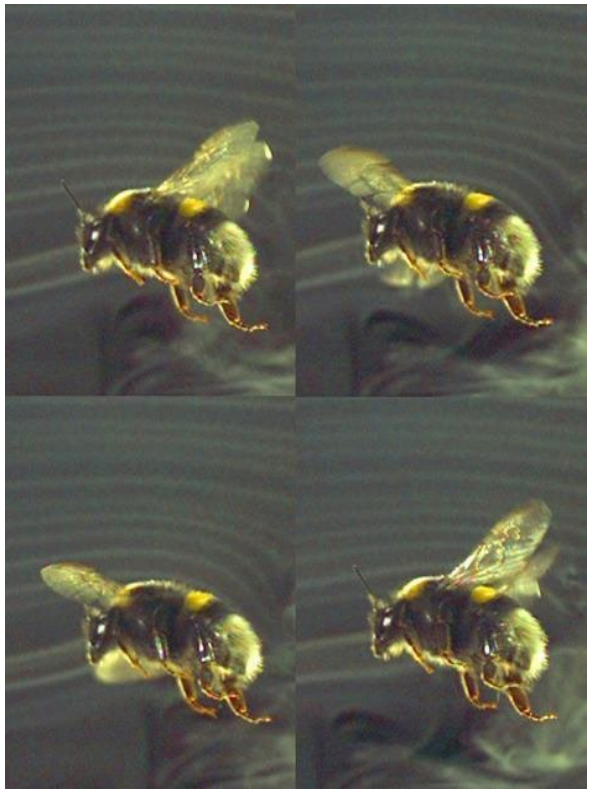
Nilson, Linda, (2004) *Teaching at Its Best: A Research-Based Resource for College Instructors*. Bolton, MA: Anker Publishing Company.

Raffini, James P. (1995) *150 Ways to Improve Intrinsic Motivation*. New York, NY: Allyn and Bacon.

What are our students likely to face as you climb the academic ladder?

Folks whose *miscalculations* tell *them* that *they* should not be able to fly!

Why the Bumblebee CAN fly…

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