Learning Objectives

Participants will:
- Understand how a student’s mindset affects academic achievement
- Learn research-based strategies for nurturing a growth mindset
- Learn the importance of grit, self-control and deliberate practice for academic success
- Become aware of goal-setting and planning techniques that are more likely to cultivate self-control and produce goal attainment
- Understand the concepts of pessimism and optimism and how they affect resiliency
- Learn basic cognitive techniques that can challenge negative thoughts and produce optimism over time

Self-Esteem Movement

- Erroneous view that telling students they were smart and talented would raise self-esteem
- Believed to be the cause of school failure, drug use and other social ills
- Lack of empirical research
- Self-esteem is a consequence— not the cause

(Dweck, Walton, & Cohen, 2014)
(Seligman, Reivich, Jaycox, & Gillham, 1995)
What is Academic Tenacity?

“...academic tenacity is about working hard, and working smart, for a long time. More specifically, academic tenacity is about the mindset and skills that allow students to:

- look beyond short-term concerns to longer-term goals
- withstand challenges and setbacks to persevere toward these goals”

(Dweck, Walton & Cohen, 2014)

Mindset
Grit and Self-Control
Goal setting
Mental contrasting with implementation intentions
Deliberate practice
Optimism and Resilience

(test cited in D. S. Yeager & Walton, 2011)

How Do We Promote Academic Tenacity?

- Mindset
- Grit and Self-Control
  - Goal setting
  - Mental contrasting with implementation intentions
  - Deliberate practice
  - Optimism and Resilience

Test Your Mindset
Belief about one's intelligence and ability
This belief influences academic tenacity
"Will my effort pay off?"

Fixed mindset
Intelligence is a fixed trait you either possess or you don't

Growth mindset
Intelligence is malleable and can be increased with effort and hard work

(Dweck, Walton & Cohen, 2014)

Do you think your mindset has changed since you were a student? If so, in what way?
How do you think your growth or fixed mindset affected you during your school years?
How do you think having a different kind of mindset would have impacted your learning?

Students with a growth mindset significantly outperform their classmates who hold a fixed mindset.
Value learning over looking smart
Believe in effort as a virtue
Are resilient in the face of setback
Welcome new challenges

(Dweck, 2010)
(Blackwell, Trzesniewski & Dweck, 2007)
Fixed Mindset

- Value looking smart over the process of learning
- Less likely to welcome challenges
- Believe effort indicates low ability
  - "If I were smarter, I wouldn’t have to try so hard.”
- View academic setbacks as evidence that they lack ability
  - “I failed because I’m dumb.”

(Blackwell, Trzesniewski & Dweck, 2007)

Where do these mindsets come from?

Strategy #1: Challenge Your Own Mindset

- Rheinberg (as cited in Dweck, 2007) measured teachers’ mindsets at beginning of the school year
- Fixed mindset teachers: students who started the year as low achievers left as low achievers
- Growth mindset teachers: many students who started as low achievers moved up
Educators with a fixed mindset:

- Put students in categories and expect them to stay there
- Judge students quickly
- May not mentor those whom they decide are incapable
- Believe learning is the student's responsibility

Educators with a growth mindset:

- Truly believe that every student can learn
- Believe learning is a collaboration in which the teacher has great responsibility

The Educator’s Mindset

**Strategy #2: Be Careful How You Praise Children**

- Praising talent, intelligence or personal traits creates vulnerability - makes it difficult to deal with setbacks
- Be careful not to overpraise mediocre performance
  - Conveys low expectations
  - Children learn to ignore what they believe to be insincere
Praising students on effort, strategy or process leads to:
- Persisting for longer on tasks
- Better task performance
- Choosing more challenging tasks
- Endorsing learning goals rather than looking smart or being right

Strategy #3: Teach Children About the Brain

- Other Resources:
  - "You Can Grow Your Intelligence"
    - https://www.youtube.com/watch?v=WtKJrB5rOKs
    - https://www.youtube.com/watch?v=ELpfYCZa87g

- When a student says, "I'm not good at this," you can add "yet"
- Turns a fixed mindset phrase into a growth mindset plan

Strategy #4: Use the Word "Yet"

- When a student says, "I'm not good at this," you can add "yet"
- Turns a fixed mindset phrase into a growth mindset plan

Strategy #5: Support Culture Change

- Create a culture that:
  - Values effort
  - Encourages risks and self-reflection
    - What did you learn from this?
    - How can you use this information?
    - What strategy did you try?
    - What strategy could you try next?
    - Did you push yourself beyond your comfort zone?
  - Learns from and celebrates mistakes
  - Includes parents in the process
Mindset summary

- Be aware of your own mindset
- Be careful to praise effort, strategy or process as opposed to talent or intelligence
- Teach children about the brain
- Use the word "yet"

Academic Tenacity

- Thinking
  - It begins with a growth mindset
  - Students need to think of themselves in certain ways to want to learn and to learn successfully.

- Self-Regulation
  - They need to regulate themselves in ways that promote learning

What is Grit?

- Perseverance and passion for long-term goals
- Being gritty means:
  - Finishing what you start
  - Staying committed to your goals
  - Working hard even after experiencing failure or when you feel like quitting
  - Staying the course for more than a few weeks

(Dweck, Walton, & Cohen, 2014)
(A. L. Duckworth, Peterson, Matthews & Kelly, 2007)
How Important is Grit?

- Ability alone does not bring about success in any field
- Grit is more predictive than IQ in academic performance
  - Smarter students may be less gritty
- Research at West Point Military Academy
- National Spelling Bee Research

Strategy #1: Encourage students to dream big

- Ask students: “What kind of adult would you like to be?” “What is your wish?”
- Provide exposure to various careers and activities
  - Not the sole responsibility of the guidance counselor
- Make connections between students and mentors, coaches, and role models
- Offer examples of people who succeeded but had to struggle to achieve success
- Student research / presentations

Dream Boards

Courtesy of Ed Gerety: https://app.box.com/s/a1pg4xp1olkp83vt1jku
Strategy #2: Connections between Academics and Long-Term Goals

- 2009 study:
  - Intervention with high schools students
  - Intended to show relevance of science to their lives

- Results:
  - Intervention group expressed more interest in science
  - Earned higher grades

Important note: gains in grades ONLY seen when students came up with the reasons themselves.

Grit deals - perseverance in pursuit of long-term goals
Self-control - the ability to resist the ‘hourly temptation’ and control impulses in the short-term
The ‘marshmallow studies’
Other Benefits of Self-Control

- Self-control measured during first decade of life predicts the following in adulthood:
  - Income
  - Savings behavior
  - Financial security
  - Physical and mental health
  - Substance use/abuse
  - Criminal convictions

(Moffitt et al., 2011)

“Even Einstein wasn’t Einstein before he put in years of passionate, relentless effort.”

(Dweck, 2010)

Vast majority of exceptional adults were never child prodigies (as cited in Ericsson & Charness, 1994)

Expert performance is acquired SLOWLY over a very long period as a result of deliberate practice

(Ericsson, Krampe, & Tesch-Romer, 1993)

10,000 hour rule (Ericsson, Krampe, & Tesch-Romer, 1993)
Characteristics of deliberate practice:

- Focus on weakness; challenge exceeds current skill
- Repetition
- Includes immediate and informative feedback
- Feels difficult; highly effortful
- Keep trying; look for new methods
- Stay focused – limit distractions and avoid multitasking

(From: Ericsson, Krampe, & Tesch-Romer, 1993)
Strategy #4: Goal-Setting

- Start with the students’ “North Star” (or future self)
- Break that down into a manageable SMART goal
  - Start with one written goal
- S.M.A.R.T.
  - Specific
  - Measurable
  - Attainable
  - Relevant
  - Time-Bound

S.M.A.R.T. Goals

- Specific
  - What is it that you want to accomplish?
  - Should be well defined
  - Poor example: I will lose some weight.
  - Better example: I will lose 5 lbs. by June 1st.

S.M.A.R.T. Goals

- Measurable
  - How will you know when it has been achieved?
  - Results should be observable and quantifiable.
  - Poor example: I will be more motivated in school.
  - Better example: I will complete all of my homework as soon as I get home from school.
**S.M.A.R.T. Goals**

- **Attainable**
  - Can the goal be reached with the available resources?
  - Should require you to stretch beyond normal abilities and routine but allow for likely success.

- **Relevant**
  - Should take you one step closer to your wish.

- **Time-bound**
  - Should state the time in which the goal will be accomplished.
1. To study harder
2. To get a 4.0 fall semester GPA
3. To become a better student
4. To maximize my study time each day before social activities
5. To improve my next test grade in Biology by one letter grade
6. To join a club
7. To locate and research at least five possible summer jobs by the end of April

Which of the following are SMART goals?

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S.M.A.R.T. Goal Activity
Strategy #5: Goal Planning

- Mental Contrasting with Implementation Intentions (MCII)
  - Thinking about the goals AND the obstacles that could stand in the way (MC)
  - Developing a plan that details when, where and how the individual will take action (II)
- People with plans are more likely to get started and stay on track
- Combined strategy improves ability to attain goals
  (Angela L. Duckworth, Kirby, Gollwitzer, & Oettingen, 2013)
  (A. Gollwitzer et al., 2011)
  (C. Gawrilow et al., 2011)

Goal Planning Steps

- Start with a wish
- Visualize best outcome
- Write one SMART goal that can be started in the next week
- Develop a plan of action
  - “When….., then…..”

Examples of Implementation Intentions (II)

- My Wish: To go to college
- Best outcome: I would get a college degree and a good job doing something I like.
- SMART goal: I will raise my GPA from a 3.0 to a 3.2 by the end of the year.
- Action plan:
  - When I am done with dinner each night, then I will complete my homework at my desk in my bedroom.
Goal Planning Steps

- Start with a wish
- Visualize best outcome
- Write one SMART goal that can be started in the next week
- Develop a plan of action
  - “When…, then…”
- Think about the biggest obstacle
- Develop a plan to deal with the obstacle
  - “If (obstacle)…, then (action)…”

My Wish: To go to college
Best outcome: I would get a college degree and a good job doing something I like.
SMART goal: I will raise my GPA from a 3.0 to a 3.2 by the end of the year.
Action plan:
- When I am done with dinner each night, then I will complete my homework at my desk in my bedroom.
Contingency plan:
- If I get distracted by my phone, then I will turn it off until my homework is done.

Goal Planning Practice
My Wish: To become a doctor
Best outcome: I would be able to help people and make a lot of money.
SMART goal: I will raise my math grade from a B to an A by the end of the marking period.
Action plan: When ____________, then ____________

What might be some common obstacles that a student will encounter when working on this goal?

What strategies could they use to overcome this obstacle?

Contingency plan: If ____________, then ____________

Focus on one goal at a time
Check your progress weekly
Is my plan working?
Do I need to make adjustments?
Do I need help? From whom?
Adjust the goal, the strategy or the "if-then" statement if necessary
Stay focused – avoid distractions
When the goal has been reached and practiced consistently, set a new one
Keep the goal worksheet in a visible location
Grit summary

- Encourage students to dream big
- Help students make connections between academics and their long-term goals
- Teach students how to write goals
- Talk about deliberate practice with students
- Help students make plans to achieve their goals
  - Ensure that their plans incorporate deliberate practice
- Make time each week to check on goal progress

Explanatory style – how we explain the bad things that happen to us; learned at a young age

Optimism is not about positive thinking but accurate, non-negative thinking

The three P's:
- Permanent – sometimes versus always
- Pervasive – specific versus global
- Personal – internal versus external

(Seligman, Emrick, Jaycox, & Gilham, 1995)
(Seligman, 1990)
(Beck, Rush, Shaw, & Emery, 1979)
Pessimism vs. Optimism

- Pessimistic statement (permanent):
  - "I'll never be good at baseball."
- Optimistic version:
  - "I didn't play well in today's game."

- Pessimistic statement (pervasive):
  - "I don't work well with people in a group."
- Optimistic version:
  - "I didn't work well with the people in that group."

- Pessimistic statement (pervasive):
  - "My husband can't do anything right."
- Optimistic version:
  - "My husband messed up and got the wrong groceries this week."

- Pessimistic statement (pervasive):
  - "Nobody likes me."
- Optimistic version:
  - "Casey doesn't like me."

- Pessimistic statement (personal):
  - "These past few weeks, I have been so clumsy in gym class."
- Optimistic version:
  - "These past few weeks, we have done some really hard activities in gym class."
Effects of Pessimism

- Depression
- Lower achievement
- More physical ailments
- More likely to fall prey to "learned helplessness" - the quitting response that comes from the belief that whatever you do doesn't matter
  - "What's the point? It won't make a difference anyway."

(Seligman, 1990)

Learned Optimism

- Not an inborn trait – it can be taught (at any age)
- Emotional disturbances are caused not by what happens to us but by our perceptions of what happens
- Automatic thoughts (self-talk)
- Thoughts affect emotions and behaviors
- Can learn skills to challenge these thoughts

(Seligman, Reivich, Jaycox, & Gillham, 1995)

"On particularly rough days when I'm sure I can't possibly endure, I like to remind myself that my track record for getting through bad days so far is 100%... and that's pretty good." - Author

(unknown)
The Role of the Teacher

- Teachers and coaches are hugely influential
- Teacher criticism can affect explanatory style (Dweck & Licht, 1980)
- Study of third grade classes
- Teachers more likely to criticize girls’ lack of ability
- Teachers more likely to criticize boys for lack of effort, not paying attention

Strategy #1: Model Optimism

- Use optimistic language when you provide feedback
- Focus on specific behaviors that they can change
- Use optimistic language when things go wrong in your classroom
- Emphasize that the setback is temporary
- “We can work to correct the problem” or try to avoid making the same error in the future

http://characterlab.org/character/optimism/

Strategy #2: Teach Students How to Challenge Negative Thinking

- ABC Model developed by Albert Ellis
- Can be used with children as young as 8 years old
Step 1: Thought-Catching

- Introduce the idea of self-talk - the automatic thoughts that pop into our heads
- These automatic thoughts affect our feelings and behavior
- Most of us do not realize that we do this
- Ask students to identify their thoughts verbally
- Older students can keep an ABC or “thought diary”

Step 2: Evidence Gathering / Disputation

- The things we say to ourselves are not necessarily true or accurate
- Treat the belief as a hypothesis
- What is the evidence to support the belief?
- What evidence counts against the belief?
- Consider the source of the evidence
- Confirmation bias

Step 3: Generate Alternatives

- What are some possible other causes for this setback?
  - List as many other interpretations as possible.
  - Use evidence to evaluate each possibility.
    - Which possibility including the original one has the most evidence?
Step 4: Decatastrophe and Plan

- What is the worst possible thing that can happen?
- What is the one thing you can do to stop the worst thing from happening?
- What is the best possible thing that might happen?
- What is the one thing you can do to help make the best thing happen?
- What is the most likely thing that will happen?
- What can you do to handle the most likely thing if it happens?

(Seligman, Reivich, Jaycox, & Gillham, 1995)
(Freeman, Pretzer, Fleming, & Simon, 1990)
(Beck, Emery, & Greenberg, 1985)

Learn to be an optimist yourself
Use optimistic language in the classroom
Teach students how to challenge negative thinking
Thought-catch
Evidence gathering
Generate alternatives
Decatastrophize and plan

Optimism Summary

Resources

- https://characterlab.org/research/opportunities
- Teacher Innovation Grants
- https://www.mindsetkit.org/
  - Lessons for teachers
  - Lessons specifically for math
  - Lessons for educator teams
  - Lessons for parents