



Teaching Growth-mindset in College Classrooms

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2021 Teaching Award Winner- Dr. Daisy Zhang-Negrerie





4 major aspects that shape students' achievement

- Motivating students to grow in and outside of the classroom
- Cultivating a positive classroom dynamics
- Applying sound instructional strategies
- Caring about students' learning process



One student's comment that summarizes all four aspects

“Professor Daisy is not only excellent at explaining the course materials, but she is **motivating** as well. First, she is an agreeable person with a smile on her face. I feel relaxed when I talk to her so I am not afraid to ask her questions. She also answers my questions patiently. Second, she **recognizes the progress** I make. **She would praise me when doing well in assignments or exams or labs.** Being excellent at teaching the course materials and being **motivating** make her an excellent instructor.”



Outline of the presentation

- What is growth mindset?
- How to cultivate and develop student's growth mindset?
- Encourage metacognitive practices to support growth mindset in students



What is growth mindset?

It is...

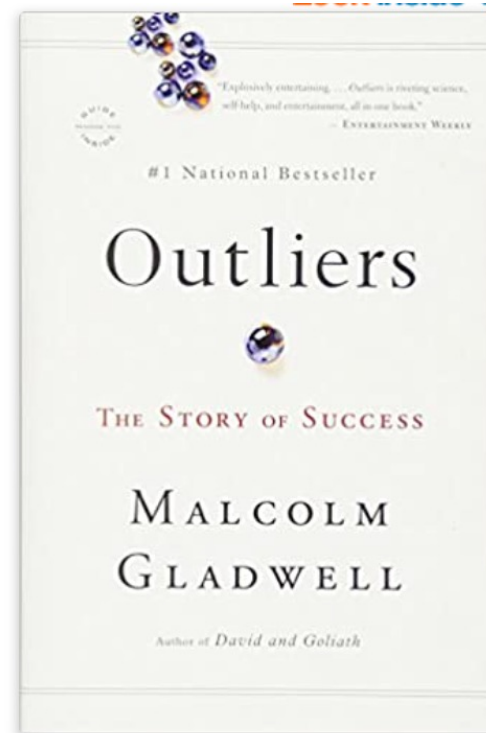
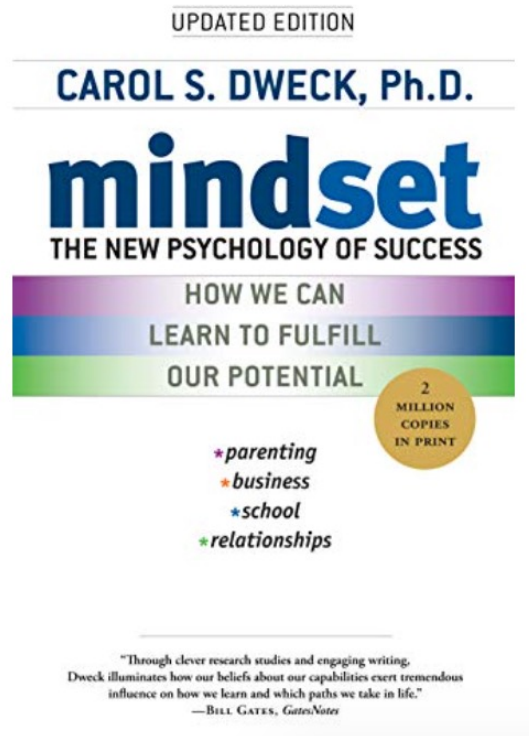
- Proposed by Carol Dweck. Discussed in detail in her book: Mindset: The New Psychology of Success.
- A belief that personality can be cultivated, and intelligence/ability can be developed.
- A belief that a person's potential is unknown and unknowable, that effort can much alter the outcome, and that the outcome cannot be predicted by the superficial assessment of one's strength or personality.

It is not...

- It doesn't ignore innate abilities.
- It doesn't over-exaggerate the role of effort.



Experimental research shows that efforts play a decisive role in the outcome



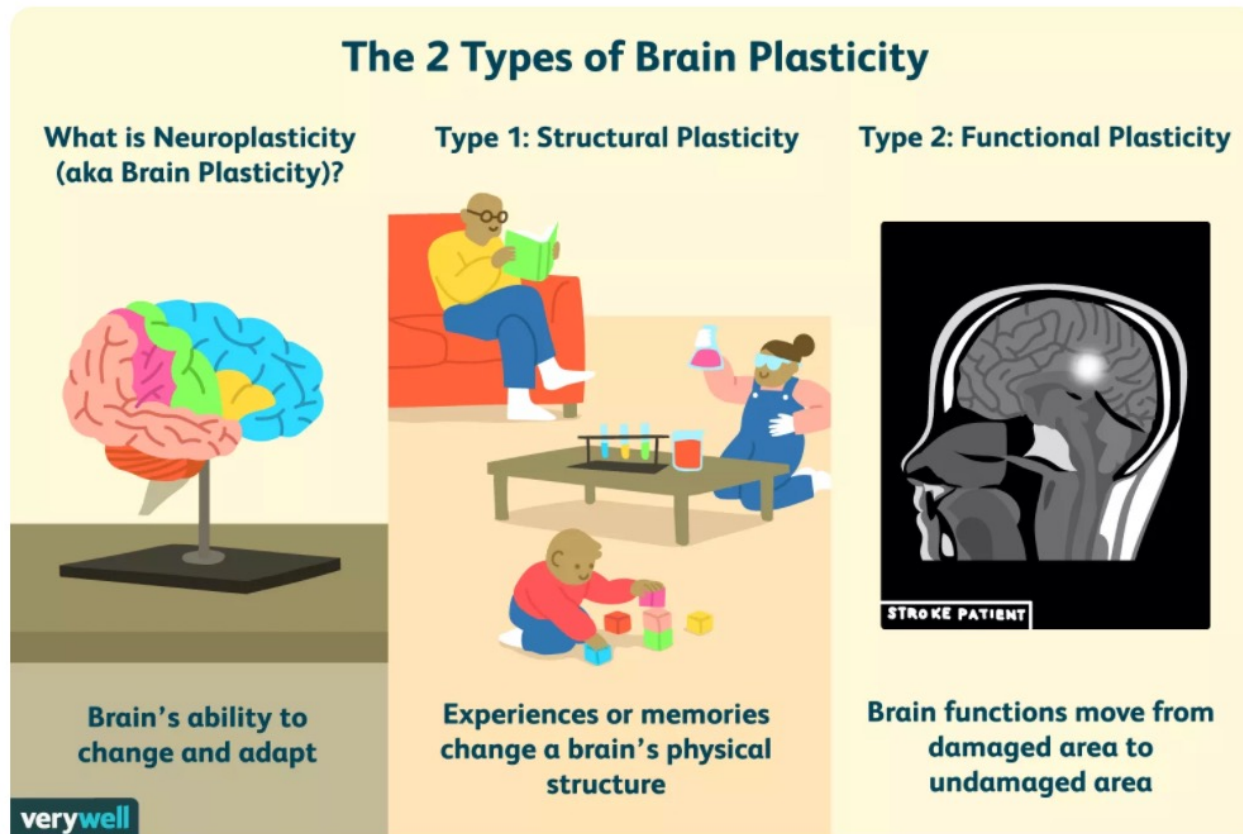
How Experience Changes Brain Plasticity

By [Kendra Cherry](#) | Updated on February 03, 2021

Print 

✓ Medically reviewed by [Shaheen Lakhan, MD, PhD, FAAN](#)

<https://www.verywellmind.com/what-is-brain-plasticity-2794886>





Growth or fixed mindset?

"He's a genius!"

"She's extremely talented."

"You did an excellent job on this assignment!"

"You're good with math; you'll be successful in this career".

"This job will improve your writing skills. Consider it."

"You're afraid because you haven't got enough practice doing it."

"She is very meticulous. Nobody can get a better result in this experiment."



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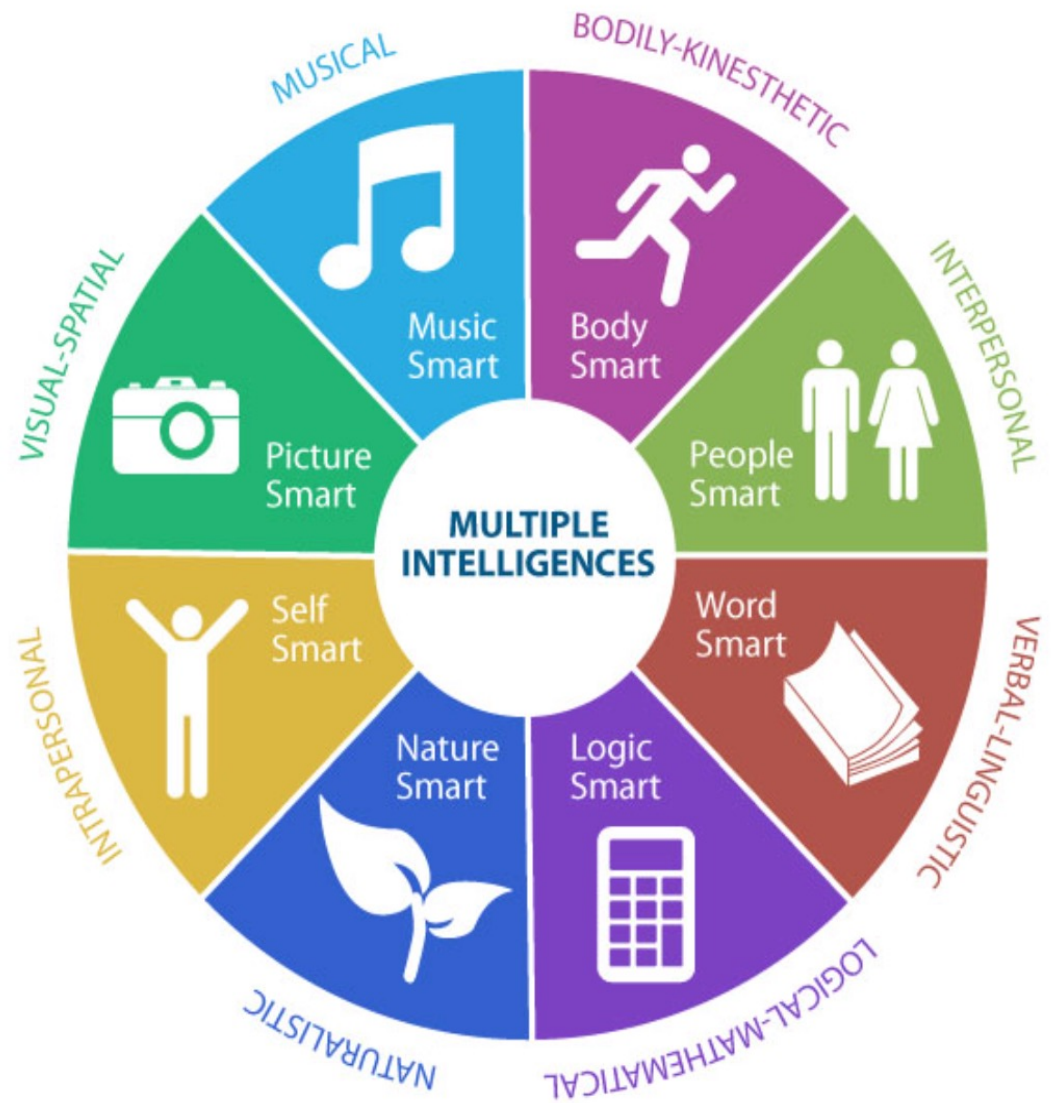
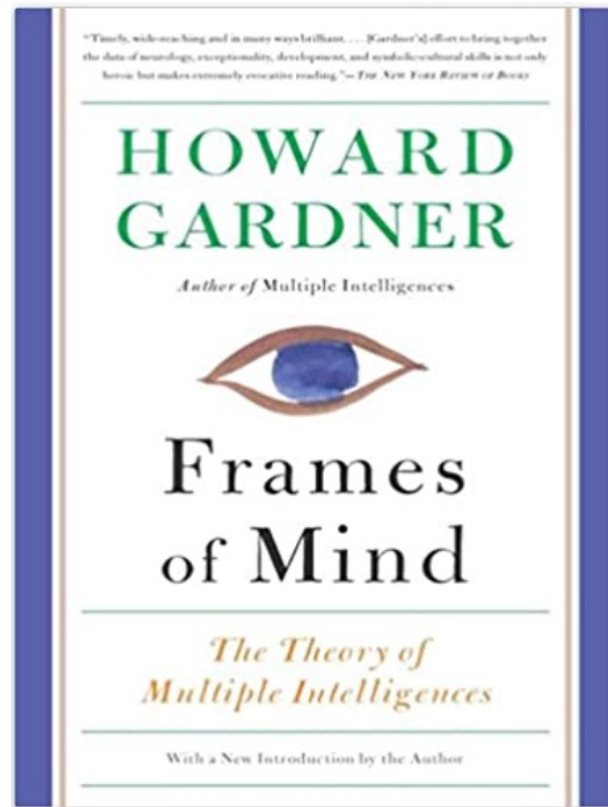
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<http://clilsteps.blogspot.com/2015/03/gardners-multiple-intelligences-theory.html>



Growth mindset doesn't ignore the differences between people.

Pedagogical applications,

- Help students to learn through their strength – discovering students' strength.
- Cultivate soft-skills in the classroom.





How to teach/cultivate/develop growth mindset in students?

- Give students room to make effort
- Help students achieve through effort
- Recognize student's effort and celebrate their achievement
- Make students see the role of effort in their achievement



Give student room to make effort

What to do –

- Give students solid assignments to practice and make progress

What not to do -

- To give too hard an assignment, relying too much on background knowledge covered in pre-requisite courses.



Help students achieve through effort

What to do –

- ❑ Give students clear instructions in every assignment
- ❑ Encourage students to ask questions

What not to do -

- ❑ To give unclear instructions, assuming “students should know this”.
- ❑ To have a negative attitude toward students’ questions.



Recognize student's effort and celebrate their achievement

What to do –

- ❑ To specifically recognize student's achievement verbally or/and in an email message
- ❑ Celebrate their achievement while praising their effort
- ❑ To communicate that you value effort more than achievement

What not to do -

- ❑ To undermine student's achievement
- ❑ To give fixed-mindset remarks



Make students see the role of effort in their achievement

What to do –

- ❑ Create non-traditional assignments
- ❑ Emphasize the role of effort in your feedback
- ❑ Have students reflect on their journey to achievement

What not to do -

- ❑ To believe that non-traditional assignments have no value but distract students from learning.

Week 6 Writing Assignment - A Creative Review Piece

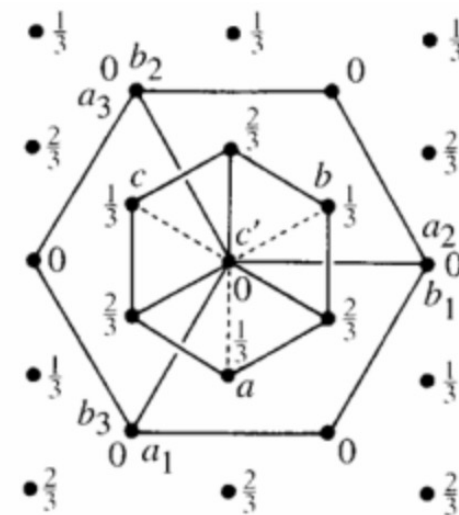
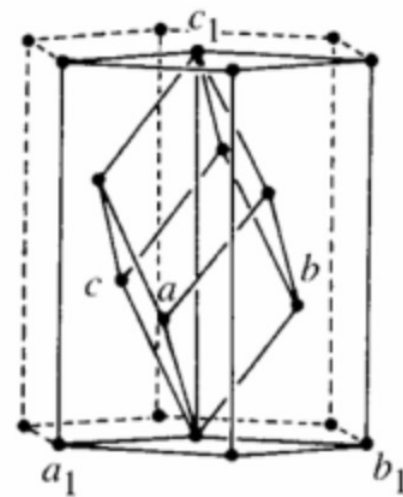
In this writing assignment, you should include **all the functional groups** we've learned in this class and all the **major, characteristic reactions** of each of the functional groups, connecting them in a **smooth, story-telling, and logical way** so readers will find the content helpful and therefore appreciate the time spent reading your writing. The content will be similar to the map we created together in class yesterday, however, **the format will be writing**, instead.

You may also go **beyond the scope** and turn your writing into **a rap or a parody**.

To help you gain a better idea of this assignment, I've uploaded (in the "Resources") a similar assignment by Christina Huang for the CHEM210 class.

I hope Christina's rap will spark in you the desire to create! I hope this assignment will take you away from the gloomy, lonely island of books, notes, and non-stop memorizations. I hope this assignment will create a chance for you to listen to some of your favorite songs while interacting with the course material in a more relaxed, enjoyable way.

I look forward to being surprised and being impressed!



DUKE KUNSHAN UNIVERSITY



Getting-to-know-you Questionnaire

1. What is your name? Did your parents tell you the story behind the name they picked for you?
2. Which country (and city/town/village) are you from? What is one cultural heritage that you appreciate most of your hometown?
3. Search among all your qualities, identify one strength you find especially useful and you feel it is fortunately to have.
4. What is one quality that you truly would like to have and are developing it?
5. What is one thing that you truly enjoy doing, which you wish to have all the time in the world to do it?
6. What qualities in a teacher are the most important to you?
7. Describe a favorite course you have had so far at DKU.

Thank you for spending the time to help me know you—know you more than a student in the chemistry classroom. I very much look forward to reading your responses.



Summary ~

The following are some of the effective ways that we have formulated and practiced in our teaching/cultivating/developing the growth mindset in the students during the course of our own classes at DKU,

- ❖ Give clear instructions.
- ❖ Encourage students to ask questions.
- ❖ Design and assign non-traditional (but relevant) assignments.
- ❖ Praise students for their efforts.
- ❖ Communicate your own belief, that, process is more important than goal, effort requires more recognition than outcome.



Approaches Daisy used in teaching growth mindset

Eliminate fixed-mindset type of remarks

Boost students' confidence

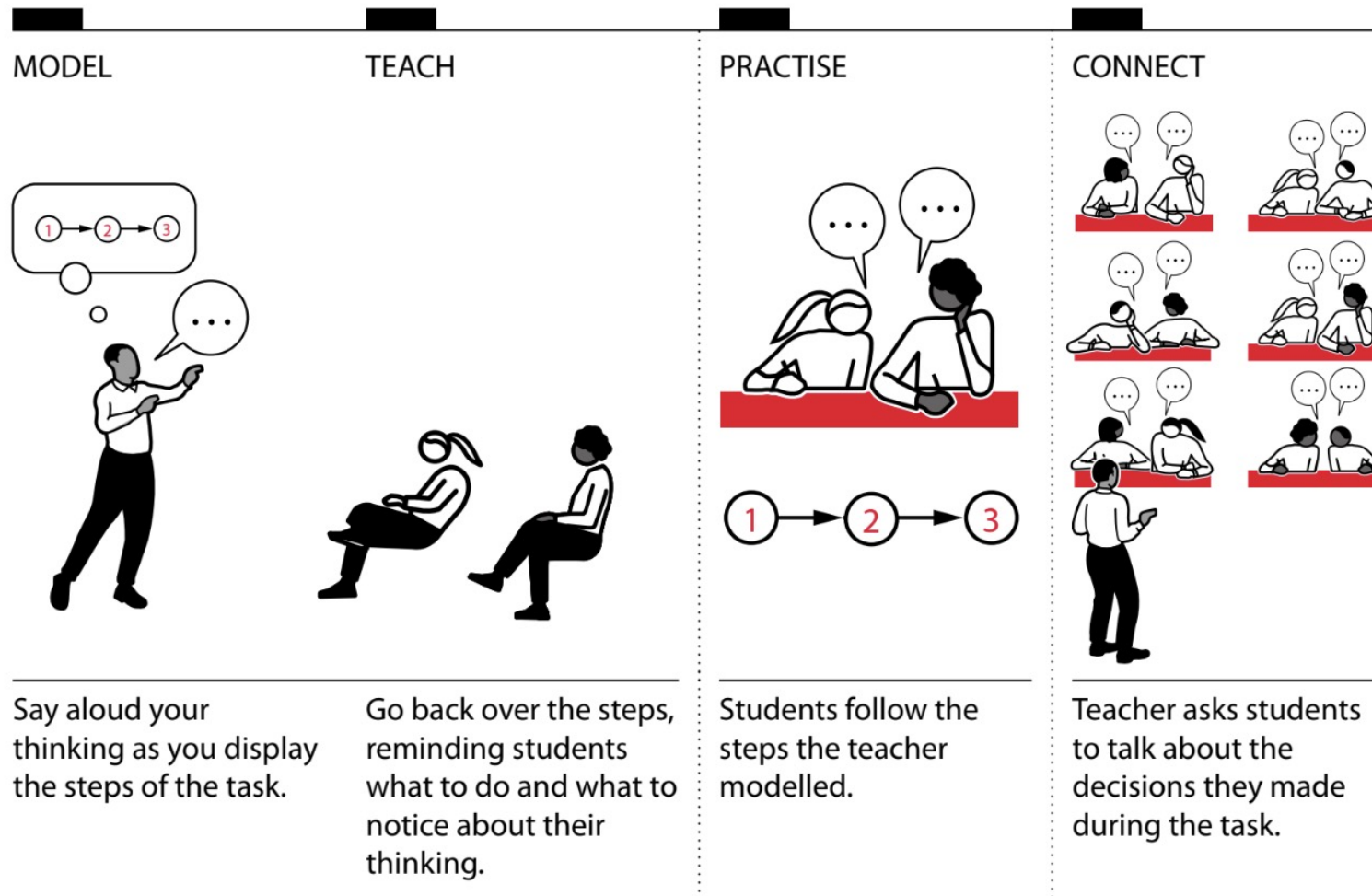
Create well-defined space for students to make the effort

Help students recognize the role of effort in their achievement



Encourage metacognitive practices to support growth mindsets

- To acquire the ability to **reflect and self assessment** to develop a sense of control over their learning.
- To scaffold students' learning to let them take ownership of their learning process.



<https://www.learningscientists.org/blog/2021/6/10-1>

Questions



A photograph of a modern building with a large glass facade at dusk. The building's interior lights are on, and the sky is a deep blue. A semi-transparent rectangular box is centered over the image, containing the text "Thank you!".

Thank you!