

Sharing the Research on Growth Mindset

By the time students are in college or university courses, many have developed an understanding of intelligence as something that is fixed and cannot be changed. Carol Dweck's research on growth mindset asserts that this is not the case. Instead, intelligence is something that can be developed through hard work and persistence in achieving one's learning goals. Students who understand that intelligence is not fixed but can be increased by putting in the time, making the effort, and sometimes changing strategies are more likely to do so to overcome challenges and ultimately succeed. When students are made aware of this research showing that they can make themselves smarter through persistence and hard work, they no longer believe that they are incapable of understanding and mastering certain concepts or skills and further understand that any setbacks in learning are simply temporary.

Pique Interest in Growth Mindset and Provide Information

To pique student interest and address misconceptions, use a media resource to introduce students to the research on growth mindset. There are several media sources available online, such as [this YouTube video](#), for example.

Follow up by sharing the following points on growth mindset based on Carol Dweck's book *Mindset: The New Psychology of Success* (2016).

- Intelligence is not a fixed skill or trait, but something that can be strengthened and developed over time.
- People such as Einstein and Darwin did not "just get it"; they worked hard over long periods of time to invent, create, and solve.
- Most of the greatest inventions and realizations, such as the light bulb, were not created by or did not occur immediately to a single person. These advances came about through collaborative efforts and after several failed attempts.
- Our lives and capabilities are determined by both our genes and our environment. In fact, contemporary research shows that in some cases our genes need stimulus from the environment to work properly.
- Essentially, the view you have about your intelligence significantly impacts the way you lead your life.
- Paying attention to feedback in order to learn rather than viewing it as a reflection of your ability will help you increase your intelligence and skills and ultimately overcome challenges.
- Natural talent is a great tool to begin with, but someone with natural talent still needs to put in the effort to learn and continue to grow.

Source

Dweck, C. S. (2016). *Mindset: The new psychology of success* (Updated ed.). Ballantine Books.

GROWTH MINDSET

VERSUS

FIXED MINDSET

DEFINITION



GROWTH

Intelligence/ability can be developed



FIXED

Intelligence/ability is fixed

HOW IT WORKS

Focus on learning goals, like being able to apply a concept beyond class

Focus on performance goals, like passing a test

Learn from mistakes by looking at what could be improved and making a plan to do so

Identify yourself as a failure when you make an error and give up

Embrace challenges because they can provide new opportunities and/or help you improve

Avoid challenges because they might make you look less intelligent to others

Believe that people can change

Believe that people can't change

SOURCE

Dweck, Carol S. *Mindset: The New Psychology of Success*. Ballantine Books, 2006.

Offering Choices When Appropriate: Assignment Submissions

Choice is motivating. Students tend to take more ownership over their learning and perform better when they are offered choices in assignments and tasks. Although it is important to avoid overwhelming students with too many options and not enough guidance, providing them with the opportunity to choose among topics or assignments that you select can be an inspiring experience. Keep in mind that it is not necessary or advisable to provide choice in every assignment or task.

Sample Varied Choices for Assignment Submissions

There are multiple opportunities for making choices available to students in online courses. Allowing students to choose how they will submit assignments can be engaging and can encourage students to try different approaches. Below are some examples.

Discussion Prompts

- Provide students with a choice of how to respond to discussion prompts.
 - Students can write a response in the discussion forum.
 - Students can upload an audio or video file of their own creation as a response to a discussion prompt or reply to a fellow student.
- Provide directions for using the audio or video software that is compatible with your LMS. You may want to consider requiring students to use this software for at least one discussion post early in the course so you can help them troubleshoot if necessary.

Assignment Submission

- Provide students with a choice of format when they complete an assignment.
 - For example, in an online journalism course, the instructor allows students to present an interview in a video or audio format, or as a text document. Students are asked to include an explanation of why their format was the best medium for the content, audience, and purpose of the interview.
- Provide students with the option to combine formats for an assignment, such as a written introduction to an audio or video file.

Assign Activities and Assignments That Address Growth Mindset

By the time students are in college or university courses, many have developed an understanding of intelligence as something that is fixed and cannot be changed. Carol Dweck's research on growth mindset asserts that this is not the case. Instead, intelligence is something that can be developed through working hard, trying different strategies, and persisting in achieving one's learning goals. Students who understand that intelligence is not fixed but can be increased by putting in the time, making the effort, and sometimes changing strategies are more likely to do so to overcome challenges and ultimately succeed. When students are made aware of this research showing that they can make themselves smarter through persistence and hard work, they no longer believe that they are incapable of understanding and mastering certain concepts or skills and further understand that any setbacks in learning are simply temporary.

Help Students Develop a Growth Mindset

The list below includes information on how to change your mindset.

- It is our beliefs about ourselves that determine whether we learn or grow from a situation, or use it to label ourselves as stupid, incompetent, or not capable. When faced with a challenge, look for what you can learn from it.
- Our brains learn through storing and connecting information. The more we challenge our brains with new information, the stronger these connections become, and the greater amount of content is stored in our brains. Look for all that you know now that you did not a year or two ago. Use this as evidence that you are continually learning and growing.
- Focus on the fact that we can always learn and improve instead of hanging on to old beliefs of not being good enough and being powerless to change that.
- Make goals and map out the steps needed to accomplish them.
- When faced with failure, which is inevitable for everyone, seek to find what you can learn from the situation and what you can do differently next time.

Assignments and Activities That Ask Students to Explore Their Mindset

- Create a discussion forum asking students to reflect on the [Famous Failures video](#).
- Ask students to regularly reflect on their growth in your course through a discussion forum or reflection journal.
- Assign students a "Personal Histories" autobiography that asks them to reflect on their background with your subject.

Sample Personal Histories Assignment for Math

Address the following topics in your math autobiography:

1. What were your past experiences in math classes like?
2. In your past math classes, did you feel like you were able to demonstrate competence?
 - a. Can you give an example of a time you did (or did not) feel that way?
 - b. What do you think counted as being competent in your past classes?
3. In your past math classes, did you feel like you were self-directed in your learning?
 - a. Do you feel like you had the freedom to approach math in your own way?
 - b. Can you give an example of a time you did (or did not) feel that way?
4. In your past math classes, did you feel as if you belonged?
 - a. Can you give an example of a time you did (or did not) feel that way?
 - b. What do you think would have made you feel like you belonged?
5. What do you expect this current math class to be like?
6. How do you think it will be similar to or different from other math classes you have taken?
7. How do you expect to participate? What will engagement with mathematics look like? How do these expectations make you feel?
8. What is something you excel at? How did you become good at it? If you replicated the process of how you became good at that thing to becoming good at math, what do you think would occur?
9. Watch: ["Famous Failures"](#)
10. What connections can you draw from the video to your own and/or your future students' work in math class?

Normalize Academic Struggle

Sharing your own academic experiences with your students can help them understand that it is not uncommon to struggle periodically when learning new skills and content. This helps them understand that you can still be successful even if it takes a little longer or if you need to try different approaches. Sharing your story helps them gain an appreciation for the effort it takes to be successful and may help them feel more comfortable with sharing their challenges with you.

To prepare to share your own story, consider the following examples:

[The Struggle Is Real](#)

“Joining the ranks of students taught Laura M. Harrison more about academic underperformance than the many volumes she'd read on the topic.”

[The Power of Sharing My Struggles With My Students](#)

Mika Twietmeyer, who teaches science at Riverside High in Durham, North Carolina, shares her journey to becoming a high school science teacher with her students.

Help Students Learn From Their Mistakes

Making mistakes is an important part of the learning process *if* we reflect on and learn from those mistakes. As instructors, we can help students benefit from their mistakes in the following ways:

- Use mistakes as a way to help students gain insights into their misunderstandings. When students are able to see where they went wrong in working through a problem or finding a solution, they are also better able to clarify and improve their thinking. When providing feedback to assignments, ask students where they think they went wrong or point out where they made their mistake. For example, “You were exactly on track until you came to step three.”
- Help students overcome their mistakes. Provide opportunities for students to use your feedback to correct their mistakes and explicitly tell them that mistakes are opportunities to learn. This can give them a sense of accomplishment and can help them become more persistent in meeting academic challenges.

Focusing on Progress

Carol Dweck's research on growth mindset demonstrates that students with fixed mindsets tend to view feedback as a reflection of their value or worth (Dweck, 2016). As instructors, we can help students accept feedback as an opportunity for learning and development by focusing on their growth or the progress that they have already made along with offering them feedback on specific assignments or tasks with opportunities to improve.

Sample Messages

When offering feedback or working with students to improve upon skills or grades, focus on the growth or progress they are making by referring to the specific improvements you have seen in their work.

The table below includes sample feedback with a focus on progress. Always begin with evidence of growth or effort you have noticed in the student's work. Then continue with specific guidance on their next steps.

Feedback on essay and incorporating various theories	"Daniel, you've learned a great deal about the northern migration of birds. Your essay on the topic was impeccable. We just need to work on how Darwinism applies to this migration. Let's set a time to chat and brainstorm ideas together."
Feedback on quiz improvement	"Anna, great job on the quiz—7 out of 10 is a huge improvement! You must have put a lot of time into studying these concepts. Keep up the good work!"
Feedback on broadening comfort zone of subject area	"Yvonne, your understanding of Bronfenbrenner's ecological systems theory as applied to female instructors in higher education is impressive. I encourage you to apply this theory to other industries in the next assignment and explore how different organizations attempt to narrow the gender gap."
Feedback on improving timeliness of assignments	"Alan, great job on your comparative essay. It was very well researched and submitted on time. See my notes on writing style and let me know if you have any questions. Keep up the good work!"

Feedback Timeliness

It is important to review assignments, quizzes, and tests in a timely manner and provide students with feedback while they still have time to incorporate it and strengthen their understanding of the material.

Focusing on Progress When Working With Students

As you work with students in virtual office hours or through the LMS chat or email, be sure to include a focus on their growth and progress just as you would when providing feedback. For instance, if a student who performed poorly on the last test comes to your office hours to discuss an algebra problem, begin the discussion by commending them for taking the initiative to come to office hours and for attempting the work alone before asking for your help.

Source

Dweck, C. S. (2016). *Mindset: The new psychology of success* (Updated edition). Ballantine Books.

Mitigating Imposter Syndrome

Imposter syndrome can be defined as a collection of feelings of inadequacy that persist despite evidence of success. “Imposters” suffer from chronic self-doubt and a sense of intellectual fraudulence that overrides any feelings of success or external proof of their competence (Corkindale, 2008).

Though imposter syndrome was identified decades ago, it is not always well understood, especially by students. Many students who feel like frauds may not know that they are suffering from imposter syndrome. Instead, these students are terrified of failure, avoid taking risks, make poor career and academic choices, and may even drop out of their college or university. Mitigating imposter syndrome can go a long way in motivating students, calming anxieties of not belonging, and increasing student success overall.

By sharing the research on imposter syndrome as well as the actions that can help overcome these feelings, we can help minimize the negative consequences of imposter syndrome.

Sharing the Research

To share the research with your students, you can begin by piquing interest in the topic and using that to facilitate a discussion around it. It is important to make this conversational because many students will benefit from knowing that their peers are experiencing similar feelings.

You can pique interest and facilitate conversation by using one or more of the learning experiences below.

Assigned Media or Text

If you decide to begin with an assigned media learning experience, find a video or audio recording on the topic. This [Ted-Ed video](#) can be a useful tool in this discussion and can be used in conjunction with a synchronous chat or discussion forum to facilitate conversation on the topic.

Sharing your Personal Experience

Although we of course want to be mindful of maintaining appropriate boundaries with our students, appropriately sharing your personal experience with imposter syndrome can help students realize that the feelings are not related to actual capabilities or potential. It may also help students open up about their own feelings and realize that many of their peers are experiencing similar feelings. Sharing your experience can be as simple as a short forum post. The sample post below is an example of the way in which you can share your personal experience with your students.

“As an undergrad student, I felt certain that I didn’t belong, and someone would show up and call me out on being a fraud and I’d be sent home. I was afraid to raise my hand with a stupid question or wrong answer that would surely expose me. It was in my second year of college that I read about imposter syndrome, realized that most of the people I knew were feeling the same way, and decided that just because I felt that way didn’t actually mean I didn’t belong or that I wasn’t capable of succeeding in college.”

Anonymous Class Poll

You can also create and assign an anonymous class poll, either synchronously or asynchronously. Once the deadline has passed and most students have participated, collect the data and share it with the class either through a discussion forum post, email, or microlecture. It will help students to see that many of their peers are experiencing similar feelings. Below is a sample poll with simple True or False questions that can be assigned in the middle of synchronous teaching or as an asynchronous assignment.

1. True or False: I sometimes feel like I do not belong in this college/university/class.
2. True or False: I am afraid that I am not really smart and one day everyone will figure it out.
3. True or False: All the things I achieve I think are just because I was lucky, there was a mix-up, or the stars happened to align.

Sharing Actions to Mitigate Imposter Syndrome

Once you have piqued student interest in imposter syndrome and facilitated a discussion that allows students to recognize it in themselves and know that it is a common experience, you can share actions that will help mitigate the feelings. The list below includes examples of actions that lessen the impact imposter syndrome can have on students.

1. Now that you are aware of imposter syndrome and your tendency to experience these feelings, recognize when they begin to emerge and label them as feelings of imposter syndrome.
2. Visualize your goals and visualize yourself achieving them.
3. Identify all the ways your accomplishments demonstrate what you have already achieved.
4. Make a list of all of your qualifications for being in college.
5. Talk to others. It helps to know that imposter syndrome is a common experience rather than a reflection of your worth or capabilities.
6. Remind yourself to have a growth mindset, and work to view failures as learning opportunities.

Sources

Bennett, J. (2018). How to overcome 'imposter syndrome.' *The New York Times*.

<https://www.nytimes.com/guides/working-womans-handbook/overcome-impostor-syndrome>

Corkindale, G. (2008, May 7). Overcoming imposter syndrome. *Harvard Business Review*.

<https://hbr.org/2008/05/overcoming-imposter-syndrome>

Create an Online Buddy System to Encourage Peer-to-Peer Support

Having students collaborate or team up with other students can create a support system that is helpful to all students and can be critical for students who need additional support, particularly in an online environment (Roper, 2007). Oftentimes instructors will create these buddy systems during the first few weeks of a course (Cost, 2012) and continue them throughout the course if the students are finding them beneficial.

Below is a suggested process for setting up a buddy system. Once you have established teams, look for ways you can increase their visibility. For example, if a student asks you a question, ask if they reached out to their team first or ask them to post your reply in the Q and A forum and send the clarification to their team or ask teams to report attendance for their team during live sessions.

Step 1: Create the buddy teams. Two strategies for creating buddy teams are outlined below. Three is an effective number for team size because it is small enough to organize communications easily, while at the same time provides flexibility in the event a team member drops the class, or other issues arise.

- **Random groups.** You may create random groups of students by organizing students alphabetically or counting off by three down the course roster.
- **Strategic groups.** You may want to create strategic groups based on similarities or differences that might be relevant to the course or for convenience. For example, it might be helpful to group students who have similar schedules or majors. If there is enough variance, you can group students who have more online learning experience with those who have less. You may also want to form groups based on demographic differences. You can gather information at the beginning of the course by asking students to fill in a survey that includes their major, career interests and experience, communication preferences, experience with online learning, digital skills, demographics, and scheduling availability. If you gather this information using SurveyMonkey or Qualtrics, you can download it into a spreadsheet to make it easy to sort and utilize.

Step 2: Post the buddy system process. Create a document that lists the groups of students who will be buddies. Post the group listing on the announcements page or send an email with the following instructions:

I have placed you into buddy groups or teams to ensure you have the opportunity to get to know some of your peers and have a ready support system. I know students often feel more comfortable asking other students questions or sharing concerns. With these teams, you will always have someone you can call on. These small groups of peers can be helpful if you are uncertain about something, you need some help, you are struggling, or you need some words of encouragement. As a team, your job is to help one another succeed in this course.

To set up your team, please follow these steps:

1. *Using the contact information on the team sheet, contact one another and set up a time to meet, either virtually or in person. Please let me know if you have any problem with contacting a team member.*
2. *At that meeting, work together to agree on a time and method for having a weekly check-in with one another for the first four weeks. You may want to continue meeting after the initial four weeks; that will be for your group to decide. If the group agrees to continue meeting, please work to be available for one another for the remainder of the course.*
3. *Your team will also need to decide the best way to communicate (e.g., chat, phone, text) outside of the weekly check-ins in the event that one of you needs help or has a question.*
4. *Please elect one person in your group to send an email to me with your buddy system process by Wednesday at 7:00 PM and notify me if any issues arise with one of your buddies (e.g., your schedules do not align, your buddy is unresponsive, etc.). I will work with the group or individuals to resolve any issues that might arise*

www.acue.org | info@acue.org

5. *Note: If a question arises during this process that you are not able to answer, please post it to the Open Discussions and Questions Forum (found on the course entry page) so other students, who likely have the same question, will see it as well as my response.*

Sources

- Cost, P. (2012). Building relationships in online classes by incorporating letter writing, buddy systems, and teaching and utilizing proper netiquette. *National Social Science Journal*, 38(2), 16–19.
- Roper, A. R. (2007). How students develop online learning skills. *EDUCAUSE Quarterly*, 30(1), 62–65.

Hold Virtual Group Office Hours

Because many online courses are asynchronous and can sometimes be isolating, virtual office hours are a good way to give students an opportunity to connect with you and their peers to create a supportive learning environment (Nilson & Goodson, 2018). Videoconferencing platforms, such as Zoom and Google Hangouts, allow students to communicate by phone, webcam, or in a chat room. Instructors can share their screen as they explain ideas, work through example problems, and answer questions. To accommodate the schedules of as many students as possible, offer virtual office hours a couple of times per week. These platforms also provide an option to record the session for students who are not able to attend any of the available sessions.

Below are a few ways to use virtual group office hours.

- **Q & A Before a Test or Assignment.** Start with a short overview of the upcoming test or assignment. Then allow students to ask questions using voice, video, or chat.
- **Extra Help.** After introducing new content that is particularly challenging, offer an extra-help session to provide students with an opportunity to work through practice exercises or problems and ask questions.
- **Open Drop-in.** Let students know that you will be available in your virtual conference room for a set period of time and invite them to drop in at any point to meet with you. This informal meeting opportunity may encourage students who want to talk to you but may not feel it is important enough to set up an appointment. If several students come around the same time, you can engage in an informal group discussion to help foster a sense of connection among the students and with you.

Source

Nilson, L. B., & Goodson, L. A. (2018). *Online teaching at its best: Merging instructional design with teaching and learning research*. Jossey-Bass.

Offering Choice When Appropriate: Course Resources

Choice is motivating. Students tend to take more ownership over their learning and perform better when they are offered choices in assignments and tasks. Although it is important to avoid overwhelming students with too many options and not enough guidance, providing them with the opportunity to choose among topics or assignments that you select can be an inspiring experience. Keep in mind that it is not necessary or advisable to provide choice in every assignment or task.

Provide Varied Resources

There are multiple opportunities for offering students choice in online courses. One of the benefits of online learning is the ability to provide varied resources for sharing content with students. Readings, videos, websites, audio files, and podcasts can provide the same content in different formats.

If you are providing various resources, be sure to let students know that they have a choice as to which ones they use. This will ensure they don't misunderstand and think they have to engage with all of them. Below is a sample resource list from a course on eLearning. You can also encourage students to add to the resource list.

Sample Resource List

Welcome to our module on the use of Social Media in eLearning. Our learning goals for this module are to:

- Use various social media sites in eLearning
- Evaluate the requirements to establish teaching presence in eLearning
- Analyze the sense of community and collaboration in eLearning environments

The varied resources listed below will provide background information and content that you may find helpful as you work through the discussions and assignments in this module.

Please feel free to engage with any or all of the resources to inform your work. As you conduct your research for your assignments, please feel free to add to the course resource page any additional resources you think your classmates will find interesting. You can earn extra credit points for sharing the title, a short description, and a link to the resource.

A Waterfall Design Strategy for Using Social Media for Instruction

- If you access this through the online library, you will be able to use an audio file to listen to this article.
 - Ahern, T. C. (2016). A waterfall design strategy for using social media for instruction. *Journal of Educational Technology Systems*, 44(3), 332–345. <https://doi.org/10.1177/0047239515615853>

TEDx: Teaching & Learning in the Age of Social Media

“Joseph Cossette shares the advantages and challenges of teaching in the age of social media, utilizing his personal experiences to connect with students.”

TED Talks: The Power of Social Media

“Social media is an undeniable force in today's world. These talks highlight its impact—from big history-defining moments to the silliness we've come to expect.”

Article: The Important Role of Social Media in Higher Education

This article from Independent News for International Students discusses how “social media can enhance a student's learning journey while also making it easier for pupils and educators to connect.”

Blog Post: [Social Media and Pedagogy](#)

On her Teaching in Higher Education blog, Bonni Stachowiak shares resources for using social media tools in the classroom.

Podcast: [Learning with E's](#)

Steve Wheeler, associate professor of learning technology in the Plymouth Institute of Education at Plymouth University, joins Bonni Stachowiak to discuss eLearning on her Teaching in Higher Ed podcast.

Offering Choices When Appropriate: Assignment Type

Choice is motivating. Students tend to take more ownership over their learning and perform better when they are offered choices in assignments and tasks. Although it is important to avoid overwhelming students with too many options and not enough guidance, providing them with the opportunity to choose among topics or assignments that you select can be an inspiring experience. Keep in mind that it is not necessary or advisable to provide choice in every assignment or task.

Choice Options With Student Descriptions

Varied Choices	Examples
Discussion prompts Provide students with a choice of discussion prompts.	In an online sociology course, the instructor provides students with three prompts to choose from in a weekly discussion forum. The instructor provides two different prompts for students to use for the introductory discussion forum.
Assignment topic Provide students with a choice of topic for an assignment.	In an online political science course, students are given two topics from the course material to choose from and asked either to create a podcast recording or write an essay. Students in a writing course are given the opportunity to review a book of their own choice.
Type of assignment Provide students with the opportunity to choose among different assignments or projects for the midterm or final.	In an online astronomy course, students are asked either to create a video presentation on a nebula near a black hole or an infographic on the topic. Students in an educational philosophy class are given the opportunity either to interview a school leader or write a blog post describing their experiences in an internship placement.
Exam type Provide students with the opportunity to choose from different examination types.	In an online economics class, students can choose either to write an essay for the midterm exam or take an online test that includes multiple choice, fill-in-the-blank, and True or False questions. Students in a fire science class are allowed to choose between an oral and a written exam.

Communicate Choice to the Students

Once you have developed assignments, projects, and exams that offer your students options to choose from, be sure to communicate this. This information should be included in the syllabus, although you may want to emphasize their ability to choose by reiterating this to the class before they begin working on the assignment. You can do this by creating a short video explaining their choices or posting the information in the class discussion forum.