

How to help students recognize their need for help

(without being negative and dismissive of their abilities)

1. Encourage metacognitive thought:

in your students: Metacognition is a personal awareness of one's thinking and learning. Once students learn to honestly ask themselves if they are really learning a concept, they move towards becoming more cognizant of their knowledge and skills (or lack thereof).

2. Encourage students to work independently: Most colleges have moved towards a group model for learning, but independent learning time is valuable too. Your students will benefit by spending time alone developing their own understanding of content.

3. Encourage students to understand college-level expectations: Spell out your expectations in terms of learning independently and personal understanding. If you use group work extensively, describe the differences between learning as a group and learning as an individual and how that affects individual

Way to Succeed can help!

We offer math-specific learning solutions for your students! Learning how to learn is their best advantage!



Help-Seeking Behaviors:

Do your students know **when** to seek help?

In the past issue of "Learning Insights," I outlined the three main reasons for failing to seek help: 1) Perceived threat (not wanting to appear stupid), 2) Perception of instructor support (cold or distant instructors seemed to dissuade students from seeking help), and 3) the students' preference for working alone (perhaps related to the first reason).

When students feel lost, they recognize the need to seek out help from others, although some resist getting help for the reasons above. However, some students do not recognize when they need help, and neglect to seek out resources because they don't think they need help. Why do students not know when they need help?

1. Recognition Learning: Students who regularly attend class can easily follow along with examples worked in class, but they neglect to "put themselves to the test" when it comes to whether or not they can solve similar problems. In other words, they have "recognition" learning, where they recognize and understand good quality problem-solving which does not equate to their own working knowledge. This type of learning can work for students in some disciplines, but not math or other STEM classes.

2. Overdependence on others: When students work together in groups, they support each other's learning and understanding of problem-solving steps, and this is great. However, some students do not move beyond the group support system to stand on their own. Group members often provide ideas and hints and work ahead.

Way to Succeed
Mindful Insights for Learning



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Part 2 of a two-part series on the help-seeking behaviors of students

This can result in a "followership" of sorts and a false sense of understanding. Related to "Recognition Learning," this phenomenon can apply also to the pervasive "solver" programs available on line that spell out answers and the steps to arrive at a solution. Students who use these supports incorrectly doom themselves to a minimal ability to perform independently.

3. History of easy success in high school: High school, and some remedial classes in college provide so many supports for the students that they are not accustomed to pro-active learning on their own. They have difficulty with the responsibility for learning that comes with college. High school teachers review extensively before tests, and often provide study guides so students know what to expect and what is covered on tests. This is often not the case at the college level, and reviews and practice tests must be generated by the students themselves.

4. Related, unexpected learning demands: While boosting GPAs and graduation rates, the high school practices of retests, re-quizzes, and accepting late work in college-prep courses does not prepare the college-bound student for the expectations they will encounter in post-secondary schools. For many students, the transition to college is difficult. Some have trouble adjusting learning behaviors in time to be successful, because they were not aware of the different expectations.

Look for ways to help your students recognize when they need help in the sidebar to the left.

Note-Taking

IS IT STILL IMPORTANT?

Currently, some STEM students do not think note-taking is important, or they have a high-tech way to take notes that seems easier. The old-fashioned practice of writing out notes on a piece of notebook paper during class or while watching an online lesson appears to be archaic and inefficient to many college students. What does the research say?

First, let's establish that for the student, note-taking is for the purpose of remembering what went on in class, for receiving instruction on methods for solving problems, and for developing an understanding of the theory or reasoning behind the problem-solving methods. Algorithms are not just random problem-solving steps, but follow a logical order and rational reasoning. While students are not encouraged to remember rote step-by-step procedures, the recall of these steps from observing others helps students to internalize the logic of

procedures they are supposed to learn. Notes help students recall those steps.

Modalities. Learning theory states that the more modalities a learner engages in, the better and more in-depth the learning. Therefore, the more ways students in your class can engage with your content, the better they will learn. Note-taking engages students in all of these modalities, helping them remember content better than other methods for collecting notes, such as audio recordings, cell-phone images, or copying another's notes.

To the right are the four major modalities of learning (VARK) that students typically engage in when in college. This is not to be confused with "learning styles," (see below) but are activities students use to recall lessons, develop understanding, and ultimately learn content. Think of these as the experience of the student as they attend your class



1. What students see (Visual): Most college-level classes are set up to take advantage of visual learning, because for the most part, it is efficient, especially in math and other STEM classes. Many algorithms, problem-solving techniques, and representations of the physical world, such as trig functions and chemical structures cannot be easily understood without visual images. Visualization also helps the student follow lengthy logical reasoning in upper-level mathematics, statistics, and physics.

2. What students hear (Auditory): Experienced instructors of all levels explain as they demonstrate their content. The verbal reasoning behind every step can clear up otherwise confusing sequencing of steps. Students who listen to these explanations, from their instructors, peers, online videos, or tutors can have the effect of internalization of processes in a logical progression.

3. What students summarize (Reading and Writing): Writing down and working out problems with an instructor, whether in a classroom or a more individual setting, helps the student to focus attention on the steps in a way that simply watching cannot do. Writing out work and explanations of steps forces the learner to see the logic of each step, and provides a record of the class for students to refer to later. When summarizing explanations, students select the most important parts of the explanation and sift through key ideas. The internal cognitions used when summarizing are a significant technique for students to construct their own understanding of class content. The physical act of writing is yet another pathway to learning.

4. What students do (Kinesthetic): Using manipulatives, physical representations of objects, building models, conducting experiments, and applying ideas to real-world problems can be effective ways of learning. This modality does not always lend itself to note-taking and is somewhat time-consuming for the fast pace required to cover content. At the college level, kinesthetic learning is most effectively used outside the classroom and for independent explorations, laboratory experiments, and when basic skills and understanding are lacking, such as in remedial classes. The kinesthetic learning modality can be a useful tool to build foundational knowledge and to apply new concepts.

Learning Modalities vs. Learning Styles

Most Cognitive Psychologists today believe the idea of "learning styles" is a myth and tend to favor the idea that people tend to use different modalities to acquire knowledge. These modalities fall generally into the four areas described to the right, easily remembered by the acronym "VARK." While some people prefer to use certain modalities to learn, effective methods for acquiring knowledge include 1) experiencing content in many modalities, 2) spacing study sessions apart, and 3) making meaningful connections with earlier learning and life experiences.

The Importance of Student Generated Goals

Goal-setting can help your students navigate and motivate themselves through their college classes, and is a skill that they should develop for their ultimate career. The act of setting goals indicates that your students have choices concerning their direction and success in life. Going to college is a worthy goal, but the reality of college-level learning leading to a career is often a foreign idea and unlike what was previously imagined by the student. Students can be thrown off their own goals by prerequisite classes, challenging content, and the discouragement of looking ahead to four more years of difficult classes.

Goal-setting is an often talked about topic in many "student success" classes. Few students, however, have applied goal setting to their own personal situations, nor have they distinguished the difference between long-term and short-term goals, and how to apply these ideas to their college experiences.



First-year college students have rarely been in charge of their own learning, scheduling their own time, or selecting a career direction for their lives until they arrive on campus. You can help your students learn to operate in a goal-centered manner by providing suggestions and modeling goal-setting with the assignments for your class.

Two broad goal-setting categories are long-term goals and short-term goals. Although both relate to goal-setting, they have very different uses and require different ways of thinking to employ.

Long-term goals set the purpose for being in school in the first place. Students are more focused when they have a career in mind, and realize that whatever they are doing in school will lead to their long-term goal of a specific profession. Students without a long-term goal in mind often don't see the usefulness of prerequisite classes, and cannot

motivate themselves through difficult times with an end result in mind.

How to help: Recommend students take a career interest inventory, often free, through the career center on your campus. Many of their services are online. Counselors are usually in place on most campuses to guide students toward career interests, co-op opportunities, and job shadowing experiences.

Short-term goals are more about addressing immediate objectives for the week, month, or semester. A weekly goal might be to plan the assignments, class times, and study times for a week and fulfill those commitments. Monthly goals could include scheduling a time to analyze effort, grades, and follow-through over the past month and making changes to improve areas that seem to be inferior. A semester goal can be to pass all classes for the academic term.

How to help: Many students need to be prompted to think about such things. Demonstrate an example plan for their first few weeks for your class and encourage them to do the same for other classes. They should be able to continue the goal-setting for the remainder of the semester.

Q&A About Way to Succeed

Q: Why do students take the personalized learning assessments three times during the semester? Isn't once enough?

A: This is a great question, one that we get from students. Students believe in the "one and done" idea of completing a Learning Assessment. However, Way to Succeed is interested in growth towards becoming a better, more independent learner, which takes time.

Students arrive on campus needing to make changes in their approaches to learning, and cannot always make those changes in one step. They



acquire skills as they experience college learning, and begin to approach their learning differently. The second and third assessments are designed to show growth and progress over time, and to point out new areas of to work on, if any.

Our assessments adapt to the individual student, so each assessment focuses more on a student's personal learning difficulties from previous assessments, and pays less attention to previous areas of strength. No two assessments are exactly the same for each student.

WATCH

Current Industry Trends: Top paying jobs for 2022

According to "FinancesOnline," the top paying jobs are all in the STEM fields, especially engineering and math.

They are:

Petroleum Engineer
\$169,000

Applied Mathematics
\$95,351

Engineering, Mechanics, Physics, and Science
\$90,085

Geosciences
\$89,799

Naval Architecture and Marine Engineering
\$86,941

Actuarial Science
\$84,104

Source:

<https://financesonline.com/trends-in-higher-education/>



QUOTE OF THE MONTH

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Marc Cuban





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We offer a unique research-supported approach to helping students become more independent and successful in your classes.

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Be ready for Fall Semester 2022 classes!

First-year, at-risk, and probationary students typically need more support than most other returning students, especially when these students enroll in online classes. [Way to Succeed](#) can help you to assist these students with a personalized, stand-alone success program that works well with mathematics and other STEM courses. [Way to Succeed](#) helps them develop their own self-regulating and metacognitive skills so they can become more independent and effective learners.

- Students learn how to learn, especially in their math or STEM class
- No grading required
- Personalized for each student
- Companion eBook for better student accountability
- Focus on improving self-regulation, time-management skills, metacognition, and accessing extra help resources
- Research-based process showing improvement in grades
- Low cost
- Compatible with any STEM text or curriculum, online or face-to-face
- Easy-to-access instructor reports
- Quick student set-up for your school or by class

Upcoming Articles in the next issue of *Learning Insights*

1. Helping Your Students Become More Self-Aware
2. Attribution Theory: The Blame Game for Poor Performance
3. How the Pandemic has Affected Learning

....and more!

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