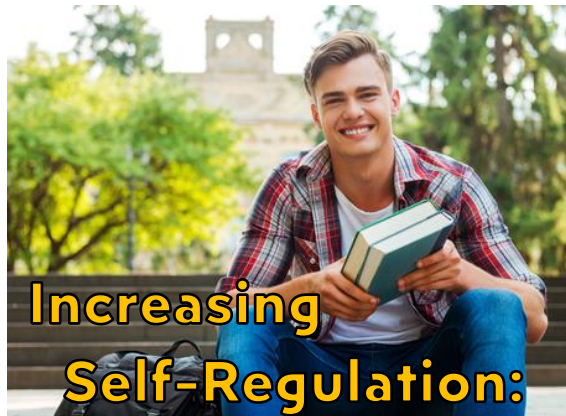


Promoting Self-Regulation

- 1. Emphasize process over innate intelligence.** Students who believe they are not “smart enough” to be successful tend to give up easily when met with a challenge. By praising effort and persistence, you are highlighting the process in which anyone can engage.
- 2. Feedback that promotes a growth mindset** mentality encourages your students to grow their talents and skills. “You don’t know that...yet,” reinforces to the students they are all capable of learning
- 3. Address students’ reluctance to change.** You can’t make students change, but many do not know what or how to change. Clarifying these ideas for students can move them past their hesitancy.
- 4. Point out how self-regulation skills transfer to other situations.** Many students use these skills in one particular setting like in your class. You can extend the applications of self-regulation simply by talking about how these skills can be used in other classes, on the job, and in their personal lives.
- 5. Encourage use of support resources.** Pro-active help-seeking behaviors are not a sign of weakness, but can make all the difference in the pursuit of academic success. Make sure your students know to take advantage of resources that help them learn.
- 6. Present the goal of becoming a more independent learner to your students.** For many, this is an unfamiliar concept. As children, they did not have to be independent. Now that they are adults, they should be moving towards this ideal type of learning.



Cultivating Self-Regulation in your Students

Students, especially novice learners, do not always engage in self-regulating behaviors. The trend seems to be that students are taking on less and less of the responsibility for learning and academic achievement. High schools are pushed to meet graduation requirements and other external measures of success to the point that the teachers and administrators take over control of the choices students used to make. This does not allow the learning that results from experiences of underachievement or failure. Therefore, your incoming college students are left with a dearth of skills and behaviors that help them to be independent and self-driven learners able to manage the requirements of college academia.

Student awareness of the need for self-regulation is addressed in the last issue of *Learning Insights*. The review included the identification of the three phases or stages of self-regulation; planning, monitoring, and reflecting, according to Zimmerman (2002). Those students who do not self-regulate often believe that someone other than themselves (professors, teachers, parents) should take control of these aspects of learning. On the contrary, college students should be at a level where they are fully independent in these practices.

Way to Succeed

Mindful Insights for Learning



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Cultivating Self-Regulation in your Students

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Making Wise Decisions when Solving Problems

Your students probably exhibit a wide range of skills in these areas associated with learning because of the diversity of educational backgrounds. Students who self-regulate fare better in all their classes, and are more likely to graduate. They tend to learn more and earn higher grades than their non-self-regulating peers and are able to manage their time, effort and motivation. How do you encourage your students to become independent learners instead of becoming dependent on you and other instructors for guidance and experiences for efficient learning?

Jantz (2010) described a list of characteristics associated with self-regulation and the strategies to improve achievement characteristics of students who self-regulate. The integration of these strategies in the column on the left in your teaching will help your students move towards developing the behaviors and cognitions of mature, independent learners.

References:

- Jantz, C. (2010). Self Regulation and Online Developmental Student Success. *Journal of Online Learning and Teaching*, 6(4), 852. <https://www.proquest.com/scholarly-journals/self-regulation-online-developmental-student/docview/1497198433/se-2>
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64-70. doi:10.1207/s15430421tip4102_2.

“...the success of students depends more upon how they approach learning, and not necessarily what style of teaching or what textbook is being used.”

Reference

Mokher, C. G., Barnett, E., Leeds, D. M., & Harris, J. C. (2019) Re-Envisioning College Readiness Reforms: Florida's Statewide Initiative and Promising Practices in Other States. *Change, 51*(2), 14-23.
<https://doi.org/10.1080/00091383.2019.1569968>



Myth: Create the perfect curriculum, schedule, pace, pedagogy, and environment, and we will have student success. No doubt, these top-down improvements, when perfected, should have a positive effect on student learning, but are these factors sufficient to prevent under-achievement? What about the *student factors* (besides background knowledge) that contribute to success and failure? Is there a way to reform from the “bottom-up” in a way that mitigates negative student learning behaviors that also builds on the positive ones to ensure success?

As educators, we reform everything we can think of to create perfect learning situations for our students, from new textbooks, interactive software, content changes, pedagogy adjustments, and many other measures that seek to improve learning. These reforms largely focus on the content knowledge and skills associated with college readiness, and rightly so (Mokher, Barnett, Leeds, & Harris, 2019). We have seen

some improvements in student achievement thanks to these reforms. However, we often ignore the very heart of the readiness mindset; the soft-skills of student learning.



The adage, “You can lead a horse to water, but you can't make him drink” describes the situation many professors face when teaching first-year college students. These students, like the horse in this analogy, can be the beneficiaries of the perfect schedule, pace, pedagogy, and environment. However, if he or she is not ready to learn, does not have the habits of mind to be a mature learner, or does not put in the work necessary for success (for whatever reason), all the planning for the “student learning experience” is for naught.

A past issue of *Learning Insights* highlighted the student factors critical for success in the college classroom, especially in mathematics and other STEM classes. The article, “Importance of Student Factors in Learning” speculated that students need to adapt to the new rigors of college quickly or they will not be successful. In other words, the success of students depends more upon how they approach learning, and not necessarily what style of teaching or what textbook is being used.

Top-Down vs. Bottom-Up Reforms for Improving Learning

This is not to say that our role as educators is unimportant. Learning content is the ultimate goal of passing a class. Quality teaching involves creating engaging and beneficial learning experiences for our students. But having your students progress through your class does not guarantee they will engage with content or benefit from your instruction or lessons.

We have done a good job of focusing on the “top-down” of institutional reforms. Now, we need to address the “bottom-up” student factors and behaviors that help our students become as receptive to learning in our classes as possible.

What reforms could we be making, besides the content reforms for our courses? By emphasizing positive attitudes, sufficient effort, self-regulation, time management, and asking for help when it's needed are all student-controlled qualities for success that should be encouraged. Students often do not engage in these behaviors when first arriving on campus as freshmen because they lack an awareness of them. Many of these characteristics were often not required for high school level learning. By increasing awareness of the qualities of mature learners you can help your students adjust to college-level learning, increasing their success.

Way to Succeed Can Help!

We designed Way to Succeed to accompany first-year math and other STEM classes. Our goal is to help your students become aware of and develop their learning skills and strategies in a personal way while freeing you to focus on your math or other STEM content. The online program works outside of class, providing personal learning profiles and targeted actions for improvement, short, thought-provoking readings, videos, and short quizzes that highlight the skills, attitudes, cognitions, and learning strategies in which successful students engage. Student can quickly make changes to become better learners and improve their academic achievement.

Teaching Strategies for Problem-Solving

Help your students make wise decisions

Professors of STEM subjects can have a positive effect on the development of effective learning and problem-solving strategies of their students.

Students are not always aware of the methods of thinking that facilitate learning and knowing how to begin when solving unfamiliar problems. These represent two types of strategies for success in a math or other STEM class. One type involves learning in general. Examples of this include memorizing new vocabulary, spending time in class, working on individual assignments, and noting the learning objectives of the lesson. The other type of strategy is specific to problem-solving, such as creating a similar but simpler problem, underlining important information in a problem, and drawing diagrams, among other strategies. Many students are accustomed to using isolated skills while studying specific types of problems and know they can just proceed with the strategies they are currently learning. They give little thought to holistic situations that might

arise on comprehensive exams or in real-life situations. With a repertoire of tools, however, they can begin to make wise decisions about how to proceed instead of drawing a blank when learning your content.

A deliberate discussion about both types of strategies can inform students on new ways of thinking about learning. Tell your students to notice how you model strategies and ways of thinking when you communicate to your students about content. This process can help students develop an eye for clues that help them determine the way to approach an unfamiliar problem.

The following is a list of ideas that encourage students to think for themselves about learning and problem-solving strategies. The list is not complete, of course, but any demonstration and discussion of using these approaches is helpful to students who are novice learners in your course.

Wisdom is the ability to apply knowledge correctly.



Strategies to Encourage Student-Initiated Strategy Use

- › Prompt thought by asking thought-provoking questions about the problem instead of telling students answers.
- › Elicit solution ideas from students in the class.
- › Give time for students to think before providing solutions.
- › Pose a question and allow students to pair with fellow learners to discuss and share ideas for solutions.
- › Suggest hypotheticals such as “What if...” and “Does that always work?”
- › Summarize after students have had a turn at trying to solve on their own. Provide students with efficient and simple strategies for solving problems if students use inefficient or ineffectual methods. Often these are better understood and appreciated by students after they have wrestled with finding methods on their own.

Problem-Solving Strategies for Students

- › Understand what you are supposed to find to solve the problem.
- › Draw a diagram, especially for trigonometric or spatial situations.
- › Identify equal quantities in the problem and write an equation.
- › Create a similar but simpler problem to discover reasonable operations to use.
- › Look for key words that denote operations, such as “of,” “less than,” or “split.”
- › See if you can simplify an equation algebraically. Sometimes a new strategy presents itself when an equation is simplified, even a little.
- › Try guessing a reasonable solution and check it by substituting it in.
- › Write out potentially relevant formulas you might need to use.
- › Look for a pattern in a series of numbers or make a list.
- › Try working backwards from the description of the problem, from a known answer from the back of a textbook, or from choices in a multiple-choice problem.
- › Try a different strategy if one does not work.
- › Think about the reasonableness of a solution you have found.
- › Check your solution using substitution back into the original problem.
- › After solving, evaluate your method. Was there an easier or more efficient way to work it out?

Q&A About Way to Succeed

Q: I want to set up Way to Succeed, but our new semester has already begun. Is there still time?

A: Yes! Unlike other programs that take weeks to set up, we can have you up and running in a matter of a day or two! If your start date has come and gone, you still can start your students after the semester has started. As long as there are ten weeks left in the semester, you should be able to have your students complete the Find Your Way to Succeed curriculum using once-a-week lessons before they take their final exams. If there is less time left in your semester or if you are on a tri-mester system, you



can double up lessons in Way to Succeed. For example, you could assign Chapter 1 (Learning how to Learn) and Chapter 2 (Taking the first Diagnostic Learning Assessment) in one week. Because the lessons are short, the doubled lesson assignment will not take a significant amount of time for your students to complete. Yet the benefits of learning how to learn are invaluable for your students! Call us and we can help you set up a workable schedule for your student's assignments in the time you have left in your academic term.

QUOTE OF THE MONTH

Identify your problems, but give your power and energy to solutions.

Tony Robbins





Visit our Website

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

Visit [Way to Succeed](#) for more information about our product, pricing, and how to order.

You can be ready for Fall Semester 2023 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 your students with a personalized, stand-alone success program designed for 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
- Our focus is on improving self-regulation, time-management skills, metacognition in your students, and how to access extra help resources
- Nothing to grade
- Personalized learning diagnostics for each student
- Companion eBook for better student accountability
- Research-based process with significant improvement in grades
- Low department and per-student costs
- 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. The Importance of Vertical Alignment for Your Curriculum
2. No-Fail Policies: Pros and Cons
3. The Role of Memorization in Problem-Solving

....and more!

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