

Self-Efficacy: Helping Students Believe in Themselves

This summary was written and compiled by [Karin Kirk](#), SERC, and contains an [overview](#) of motivation research and pertinent [references](#).



Self efficacy is commonly defined as the belief in one's capabilities to achieve a goal or an outcome. Students with a strong sense of efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated. These students will put forth a high degree of effort in order to meet their commitments, and attribute failure to things which are in their control, rather than blaming external factors. Self-efficacious students also recover quickly from setbacks, and ultimately are likely to achieve their personal goals. Students with low self-efficacy, on the other hand, believe they cannot be successful and thus are less likely to make a concerted, extended effort and may consider challenging tasks as threats that are to be avoided. Thus, students with poor self-efficacy have low aspirations which may result in disappointing academic performances becoming part of a self-fulfilling feedback cycle. ([Bandura \(more info\)](#)) [[Margolis and McCabe, 2006](#)]

How can students gain self-efficacy?

There are four sources of self-efficacy. Teachers can use strategies to build self-efficacy in various ways.

Mastery experiences - Students' successful experiences boost self-efficacy, while failures erode it. This is the most robust source of self-efficacy.

Vicarious experience - Observing a peer succeed at a task can strengthen beliefs in one's own abilities.

Verbal persuasion - Teachers can boost self-efficacy with credible communication and feedback to guide the student through the task or motivate them to make their best effort.

Emotional state - A positive mood can boost one's beliefs in self-efficacy, while anxiety can undermine it. A certain level of emotional stimulation can create an energizing feeling that can contribute to strong performances. Teachers can help by reducing stressful situations and lowering anxiety surrounding events like exams or presentations.

[[Margolis and McCabe, 2006](#)] and ([Bandura \(more info\)](#))

Pedagogic strategies that foster self-efficacy

It is particularly exciting to note that teaching strategies used in the classroom can and do make a difference to students' self-efficacy. (Fencl and Scheel, 2005)

Research shows that the type of learning environment and teaching method can improve self efficacy in the classroom ([Bandura \(more info\)](#)). A similar result was reported by [Fencl and Scheel](#). They describe a required, nonmajors' physics course where the effects of different teaching methods on the classroom climate and self-efficacy were measured. The students' response indicated that a question and answer format, inquiry-based lab activities and conceptual (rather than quantitative) problems had a significant effect on creating a positive climate in the classroom. In addition to those pedagogies, collaborative learning and the use of electronic applications showed a positive correlation with increased self-efficacy in their student sample. Fencl and Scheel point out that the teaching methods that showed a measurable positive effect share the common feature of engaging students in a comfortable or creative manner. Moreover, pedagogies such as collaborative learning and inquiry-based activities have also been shown to have a strong correlation with how well students learn physics [[Fencl and Scheel, 2005](#)].

Bandura also concludes that cooperative learning strategies have the dual outcome of improving both self-efficacy and academic achievement. "Cooperative learning structures, in which students work together and help one another also tend to promote more positive self-evaluations of capability and higher academic attainments than do individualistic or competitive ones." ([Bandura \(more info\)](#))

Other pedagogies for improving self-efficacy include:

- Establish specific, short-term goals that will challenge the students, yet are still viewed as attainable. [[Schunk and Pajares, 2002](#)]
- Help students lay out a specific learning strategy and have them verbalize their plan. As students proceed through the task, ask students to note their progress and verbalize the next steps. [[Schunk and Pajares, 2002](#)]
- Compare student performance to the goals set for that student, rather than comparing one student against another or comparing one student to the rest of the class([Bandura \(more](#)

[info](#)).

Teaching Practices to Avoid

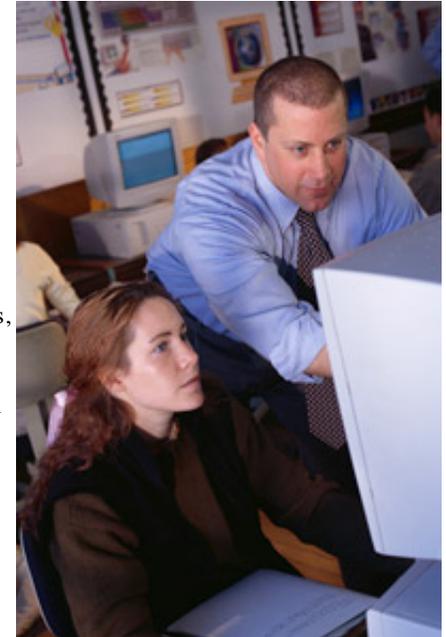
In his 1994 textbook chapter, Albert Bandura notes that certain well-worn pedagogical practices may have the unintended effect of diminishing the self-efficacy of students who do not reside at the top of the class academically. These include:

- Generalized, "lock-step" instruction that is inflexible and does not allow for student input. A formulaic type of instructional setting makes it harder for students to ask questions or become involved in the process. The result may be that if a student becomes confused or discouraged, they are likely to remain so.
- Statements or teaching practices that compare students' performance against each other. This may raise the self-efficacy of the top students, but is likely to lower the self-efficacy of the rest of the class. ([Bandura \(more info\)](#))

Tips to improve self-efficacy for struggling students

(from [Margolis and McCabe, 2006](#))

- **Use moderately- difficult tasks**
If the task is too easy will be boring or embarrassing and may communicate the feeling that the teacher doubts their abilities; a too-difficult task will re-enforce low self-efficacy. The target for difficulty is slightly above the students' current ability level.
- **Use peer models**
Students can learn by watching a peer succeed at a task. Peers may be drawn from groups as defined by gender, ethnicity, social circles, interests, achievement level, clothing, or age.
- **Teach specific learning strategies**
Give students a concrete plan of attack for working on an assignment, rather than simply turning them loose. This may apply to overall study skills, such as preparing for an exam, or to a specific assignment or project.
- **Capitalize on students' interests**
Tie the course material or concepts to student interests such as sports, pop culture, movies or technology.
- **Allow students to make their own choices**
Set up some areas of the course that allow students to make their own decisions, such as with flexible grading, assignment options or self-determined due dates.
- **Encourage students to try**
Give them consistent, credible and specific encouragement, such as, "You can do this. We've set up an outline for how to write a lab report and a schedule for what to do each week - now follow the plan and you will be successful."
- **Give frequent, focused feedback**
Giving praise and encouragement is very important, however it must be credible. Use praise when earned and avoid hyperbole. When giving feedback on student performance, compare to past performances by the same student, don't make comparisons between students.
- **Encourage accurate attributions**
Help students understand that they don't fail because they're dumb, they fail because they didn't follow instructions, they didn't spend enough time on the task, or they didn't follow through on the learning strategy.



Teachers need high self-efficacy too

Teachers with a high sense of efficacy about their teaching capabilities may have an easier time motivating their students and enhancing their cognitive development. These teachers may also be able to rebound from setbacks and more willing to experiment with new ideas or techniques. Low efficacious teachers may rely more on a controlling teaching style and may be more critical of students. ([Woolfolk Hoy, 2003](#)) and ([Bandura \(more info\)](#))

"Schools in which staff members collectively judge themselves capable of promoting academic success imbue their schools with a positive atmosphere for development that

promotes academic attainments regardless of whether they serve predominantly advantaged or disadvantaged students." ([Bandura \(more info\)](#))

Further reading

Web sites

[Self-Efficacy \(more info\)](#)

by Albert Bandura, Stanford University

This is a comprehensive summary of the topic written by one of its pioneers. The site provides a definition of self-efficacy, characteristics of efficacious people, and a description of how self-efficacy can be developed or undermined. The author describes self-efficacy in social, family and school settings and in various stages of life.

[Self-Efficacy Beliefs in Academic Contexts \(more info\)](#)

by Frank Pajares, Emory University

This site contains an extensive historical overview about self-efficacy and its place in education. Topics include the origins of the theory, current research and educational applications. One of the author's conclusions is that the educational system would benefit from additional focus on self-efficacy in students.

[Information on Self-Efficacy: A Community of Scholars](#)

This is a clearinghouse of information about self-efficacy, hosted by the Division of Educational Studies at Emory University.



Journal Articles

Improving Self-Efficacy and Motivation: What to Do, What to Say

by Howard Margolis and Patrick P McCabe

[citation and bibliographic information](#)

This article suggests practical solutions to improve the motivation of struggling learners. Specifically, the authors present strategies such as using peers as role models, teaching specific learning strategies, presenting the students with options and choices, communicating recent success, and more. These tactics can strengthen struggling learners' beliefs in their academic abilities and increase their willingness to engage in academic tasks.

Engaging Students: An Examination of the Effects of Teaching Strategies on Self-Efficacy and Course Climate in a Nonmajors Physics Course

by Heidi Fencl and Karen Scheel

[citation and bibliographic information](#)

Self-efficacy is a key predictor of achievement and retention in most academic areas, including the sciences. In this study, the effects of teaching strategies on self-efficacy and course climate were examined. The teaching methods that made significant contributions to self efficacy were question and answer, collaborative learning, conceptual problems, electronic applications and inquiry lab activities.

[The Development of Academic Self-Efficacy](#)

by Dale Schunk and Pajares, Frank Pajares

This textbook chapter provides a synthesis of educational psychology research as it relates to students' beliefs in their own abilities. The authors describe self-efficacy and its relation to other motivation constructs and explain the role of various sources of and influences on self-efficacy. The effects of various pedagogical practices are discussed, including a description of specific methods that improve self-efficacy. The role of gender and ethnicity on self-efficacy are also discussed.

Self-Efficacy in College Teaching

by Anita Woolfolk Hoy, The Ohio State University

This essay examines the topic of self-efficacy in the context of teachers' self-efficacy and how that translates into their performance. The author asserts that highly efficacious teachers tend to be more open to new ideas, more willing to experiment with new methods to better meet the needs of their students, and more committed to teaching. They persist when things do not go smoothly and are more resilient in the face of setbacks. And they tend to be less critical of students who make errors and to work longer with a student who is struggling.