

Self-Efficacy Assessment Suite Technical Report

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Defining Self-Efficacy

“Self-efficacy is the perceptions an individual has about his or her capabilities to perform at an expected level, achieve goals, and complete moderately challenging tasks” (Noonan & Gaumer Erickson, 2018a, p. 23). High levels of self-efficacy are associated with more success in K-12 settings (Bandura, 1989; Mercer et al., 2011; Snipes et al., 2012) and in postsecondary environments (Komarraju & Nadler, 2013; Roddenberry & Renk, 2010). Self-efficacy differs significantly from self-esteem, as self-esteem is an overall valuation of yourself. In contrast, self-efficacy is a belief about your capacity related to a particular task (Bandura, 1994; Schunk & Pajares, 2001).

The Self-Efficacy Assessment Suite measures a student’s knowledge, perceived level of proficiency, and performance around two essential components of self-efficacy:

1. Focus on your effort, progress, and learning.
2. Take steps to increase your confidence in your abilities (Noonan & Gaumer Erickson, 2018a).

The Assessment Suite

Self-efficacy assessments included in this suite are formative measures designed to guide students’ reflection and educators’ instruction. The assessments are not intended to provide a summative evaluation. When combined with other data sources, these assessments guide decision-making for direct instruction that builds students’ knowledge, for guided practice that develops students’ fluency, and for independent practice with ongoing coaching that promotes students’ proficiency and generalization. **All assessments are free** for educational professionals to administer if utilizing the results for skill development or program improvement.

Formative Questionnaire. This self-report measure asks students to rate behaviors on a 5-point, Likert-type scale from *Not Very Like Me* to *Very Like Me*. The questionnaire was designed for students in middle and high school. The items on the questionnaire are written at a sixth grade reading level, per the Flesch–Kincaid readability score (Kincaid et al., 1975). The Self-Efficacy Formative Questionnaire should not be used as a pre/post measure. As students learn more about self-efficacy, their internal frame of reference may shift, causing them to become more critical in their self-assessment; this phenomenon is called response shift bias (Bray et al., 1984; Drennan & Hyde, 2008). Accommodations should be provided when appropriate and may include reading the items aloud, explaining the items, or having a scribe fill in the response option. See Appendix A for Formative Questionnaire items.

The questionnaire can be cited as: Gaumer Erickson, A. S., Noonan, P. M., Heger, E. S., & Loewenstein, M. (2020). Self-efficacy formative questionnaire (Version 2). In P. Noonan, A. Gaumer Erickson, & M. Loewenstein (2020). *Teaching self-efficacy in middle and high school classrooms* (2nd ed.; p. 1-5) [Teacher lessons and student workbook]. College & Career Competency Framework. <https://nge.selz.com/>

Knowledge Test. This curriculum-based measure assesses students’ knowledge of self-efficacy constructs and judgement of the most effective course of action when applying these constructs. The test includes multiple-choice, true/false, situational judgement, and short-answer items. The Self-Efficacy Knowledge Test is directly aligned with lessons provided in *Teaching Self-Efficacy in Middle and High School Classrooms (2nd ed*, available for purchase at <https://nge.selz.com/>). The Knowledge Test can be used as a pre/posttest prior to and after teaching the self-efficacy lessons. Accommodations should be provided when appropriate and may include reading the items aloud, explaining the items, and having a scribe fill in the response option. See Appendix B for Knowledge Test items.

The test can be cited as: Gaumer Erickson, A. S., Noonan, P. M., & Loewenstein, M. (2019). Self-Efficacy Knowledge Test. In P. Noonan, A. Gaumer Erickson, & M. Loewenstein (2020). *Teaching self-efficacy in middle and high school classrooms* (2nd ed.; p. 1-5) [Teacher lessons and student workbook]. College & Career Competency Framework. <https://nge.selz.com/>

Performance-Based Observation. This assessment is designed to be embedded within authentic situations such as academic courses and extracurricular activities. The Self-Efficacy Performance-Based Observation can be used at purposeful intervals to monitor the development of each student. Based on observations across time or in specific situations, the educator rates each student’s self-efficacious behaviors on the following scale:

- *Beginning*: Not yet able to demonstrate without scaffolding;
- *Emerging*: Minimal or superficial demonstration, prompting likely required;
- *Proficient*: Sufficient demonstration, including self-appraisal and detailed, personalized application;
- *Advanced*: Independent and consistent demonstration, teaches/prompts others; or
- *Not Observed*: Documented if there has not been the opportunity to observe the behavior performed by an individual student.

See Appendix C for Performance-Based Observation items.

The observation can be cited as: Noonan, P. M. & Gaumer Erickson, A. S. (2018). Self-Efficacy Performance-Based Observation. Derived from *College and Career Competency Sequence*. College & Career Competency Framework. <http://cccframework.org>

Performance-Based Reflection. This assessment, directly aligned with the Performance-Based Observation, promotes students’ reflection on their demonstration of self-efficacious behaviors within authentic situations. This four-item rubric guides students to determine the quality of their ability to focus on their effort, progress, and learning and taking steps to increase their confidence in their abilities related to a specific task or project. Triangulating students’ ratings with the performance-based observation results in a more comprehensive analysis of performance. The Self-Efficacy Performance-Based Reflection can be used at purposeful intervals to monitor the development of each student. See Appendix D for Performance-Based Reflection items.

The self-assessed reflection can be cited as: Noonan, P. M., Gaumer Erickson, A. S., & Maclean, T. L. (2021). Self-Efficacy Performance-Based Reflection. Derived from P. Noonan & A. Gaumer Erickson (2018). *College and Career Competency Sequence*. College & Career Competency Framework. <http://cccframework.org>

Administering the Formative Questionnaire and Knowledge Test

Teachers can simultaneously launch the Self-Efficacy Formative Questionnaire and Knowledge Test by visiting <https://www.cccstudent.org>, creating a free account, and following the instructions provided on the website. Through this website, which is free and available to all educators, these assessments have been combined to ease administration, together requiring less than 20 minutes for students to complete. Once students have completed the assessments, teachers can view graphed results for individual students and aggregate results for all their students. Teachers can also download a raw data file.

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Teachers distribute the assessments to students by providing the URL (<https://www.cccstudent.org/>) and a unique survey code; the survey code is provided on the website when a survey is added to the teacher's portfolio. Once on the website, student select *Take a Survey* and enter the code. They do not log into the website. The assessment results are automatically generated for each student and available to him/her once all items are answered. This enables each student to reflect on results immediately.

Directions to Students. Explain to students that they will each take the questionnaire and the knowledge test. Results will help them better understand how self-efficacious they are right now, determine their knowledge of self-efficacy concepts, and promote reflection on their ability to identify how best to apply self-efficacy in specific situations. Inform students that this test will not be used as a grade, but you want them to be reflective and honest because they will use the information to think about their strengths and areas for growth.

Provide students with the URL (<https://www.cccstudent.org/>) and code. Once on the website, students select *Take a Survey* on the top left and enter the code. Remind students to enter their student-specific number (e.g., school ID or assign each student a number). This number will allow you, as the teacher, to view their individual results.

Tell students that for items 1-24, as they read each item, they should pause for a moment to think about the last couple of months and how well they were able to be self-efficacious in various situations to work toward or accomplish tasks. For instance, they might consider how often they think about their effort, learning, and progress, how that relates to their confidence in their abilities, or how they learn from their own and others' past successes or constructive criticism.

Here are some example items from the survey:

- When I'm struggling to accomplish something difficult, I focus on my progress.
- Once I've decided to accomplish something, I keep trying, even if it is harder than I thought.
- I see making mistakes as a normal part of learning.
- I use feedback to get better.

Tell students that items 25-45 test knowledge of self-efficacy concepts and potential ways to build confidence in certain situations. Be sure to remind students that, after finishing the test, they should stay on the results page to record their results. Give students adequate time to complete the assessment (approximately 15–20 minutes).

Prompt students to write down their self-assessment scores from the graph on the results page. The scores are on a 100-point scale so that they can be interpreted as percentages. If a student received a score of 75 on Component 1, that is similar to a 75% on that component. In addition to the composite scores, each item is displayed with the associated component and student's rating. Have students identify a couple questionnaire items that are strengths and a couple questionnaire items that represent areas for improvement.

Finally, have students write down their knowledge score. This score is at the end of the report. Additional instructions for facilitating students' reflection and using the results of the Self-Efficacy Questionnaire & Knowledge Assessment are provided in *Teaching Self-Efficacy in Middle and High School Classrooms (2nd ed)*, available for purchase at <https://nge.selz.com/>.

Scoring the Essay Item. Log into your account on <https://www.cccstudent.org/>. In My Portfolio, click on the name of the assessment. The table provides the option to score each student's response to the essay question: *Imagine that you are facing a challenge and you are not sure you can be successful. Name three things you could do to raise your belief in yourself.* Assign points on a scale of 0-3 on the comprehensiveness of the answer; assign one point for each self-efficacy strategy described.

Using the Results. Results by component (i.e., focus, steps) support reflection on relative strengths and areas for improvement. Students can analyze their individual results to increase behaviors in which they, based on their own reporting, are not performing consistently. Students can also discuss self-efficacy with others and begin to apply this knowledge to their own experiences.

By determining self-efficacy strategies to pinpoint, teachers can enhance their instructional practices through targeted instruction (see *Teaching Self-Efficacy in Middle and High School Classrooms*). After facilitating continual guided and independent practice with feedback, teachers can readminister the Self-Efficacy Formative Questionnaire and Knowledge Test, and based on the results, alter instruction to further bolster students' knowledge and skills. It is expected that after instruction, students' scores will increase on the knowledge portion of the assessment; the self-report questionnaire portion is not designed as a pre/post measure but instead to promote ongoing reflection of relative strengths and areas for growth. The data allow teachers to engage in data-driven decision-making to increase their students' abilities to focus on their effort, progress, and learning and to take steps to increase confidence in their abilities.

Administering the Performance-Based Observation & Reflection

The Self-Efficacy Performance-Based Observation is purposefully planned and administered at key intervals during the school year. Teachers must first select the performance-based indicator(s) to measure, then create conditions in which students have opportunities to demonstrate the specific self-efficacy behaviors. *Teaching Self-Efficacy in Middle and High School Classrooms* (2nd ed; <https://nge.selz.com>) provides numerous curriculum-based activities that lend themselves to performance-based observations.

Indicators can be identified schoolwide to be measured on a quarterly basis by every educator or across core courses. Alternatively, indicators most aligned to classroom routines or projects can be selected by each educator. To further promote student reflection, each student can rate his/her proficiency on the self-efficacy indicator(s) related to the specific context (e.g., course or activity). Teachers can then compare these self-ratings to observed behaviors, lending strength to the ratings or determining inaccuracies in knowledge or fluency.

Using the Results. Results support students' reflection on relative strengths and areas for improvement. Educators use the results to reflect on whole-class instruction (including guided practice, coaching, and constructive feedback) necessary for students to become proficient in a given indicator. When reviewing the results for individual students, instructional support may be necessary to augment the learning and practice, focusing on growth toward proficiency in the indicator(s).

Permission to Use the Assessments

Unlimited rights are given to educational professionals to administer the assessments and utilize the results for skill development and program improvement. Educators are expected to include the citation of the assessment(s) within all dissemination of assessment items or results. The content of the assessments cannot be modified, reproduced, or published in any profit-bearing format without prior written permission from the authors. For permission to use the assessment(s) for research purposes, please contact Dr. Amy Gaumer Erickson (agaumer@ku.edu).

Reliability and Validity

Reliability. The Self-Efficacy Formative Questionnaire (Version 2) was initially tested for reliability using Cronbach's coefficient alpha with 2,698 responses (primarily middle school and high school students) in 2020. Exploratory factor analysis (EFA) was performed to test the concept homogeneity. The dataset included 447 responses from 5th grade students, 416 from 6th grade students, 146 from 7th grade, 112 from 8th grade, 656 from 9th grade, 237 from 10th grade, 85 from 11th grade, 152 in 12th grade, and 447 post-high school. The self-report questionnaire was found to be highly reliable (24 items; $\alpha = .908$), and factor analyses supported the

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scale as measuring a single factor, referred to as self-efficacy. Internal consistency above $\alpha = .88$ was maintained for grade level and gender subgroup analyses. When converted to a 100-point scale, the bottom quartile ranged from 7.29–58.33; the second quartile ranged from 58.34–69.79; the third quartile ranged from 70.00–79.17 and the top quartile ranged from 79.18–100. To guide students' reflection, items are loosely grouped into two categories: (1) Focus on your effort, progress, and learning; and (2) Take steps to increase your confidence in your abilities.

The Self-Efficacy Knowledge Test was tested for reliability using Cronbach's coefficient alpha with 1703 responses (primarily middle school and high school students) in 2020. Exploratory factor analysis (EFA) was performed to test the concept homogeneity. The dataset included 352 responses from 5th grade students, 396 from 6th grade students, 97 from 7th grade, 39 from 8th grade, 478 from 9th grade, 74 from 10th grade, 70 from 11th grade, 1113 in 12th grade, and 84 post high school. The knowledge test demonstrated adequate reliable (20 items; $\alpha = .75$), and factor analyses revealed that the test measured a single factor, referred to as self-efficacy. When converted to a 100-point scale, the bottom quartile ranged from 15-55; the second quartile ranged from 56-70; the third quartile ranged from 71-85 and the top quartile ranged from 86-100. Each item discriminated positively, demonstrating incremental increases in mean scores across each quartile of overall score. The Self-Efficacy Performance-Based Observation and Reflection have not yet been tested for reliability.

Content Validity. Construction of the measures began in 2016 after a thorough review of literature on self-efficacy, including the related terms of perseverance, motivation, confidence, growth mindset, and neuroplasticity. Abbreviated literature reviews (elementary and secondary research guides) were developed and are available at <http://resources.cccframework.org>. Existing measures, including the Self-Efficacy Questionnaire for Children (Muris, 2001), the Children's Self-Efficacy Scale (Bandura, 2006), the Academic Efficacy subscale from the Patterns of Adaptive Learning Scales (Midgley et al., 2000), and the Student Self-Report of Academic Self-Efficacy (Hoover-Dempsey & Sandler, 2005) were reviewed by a team of researchers. Items were constructed and categorized. Three educational professionals with doctorates in education and one licensed clinical social worker specializing in adolescent social-emotional development reviewed the items. Revisions were made to enhance research alignment, response specificity, and applicability to adolescents.

Substantive Validity. The Self-Efficacy Formative Questionnaire and the Self-Efficacy Knowledge Test items were tested in 2020 with five adolescents using a think-aloud format where the adolescents verbalized their thought processes for answering the items. These students also identified items that were confusing or may have varied interpretations. Revisions were made to enhance response specificity and applicability to adolescents. Beta testing was conducted in 2020 with 681 students in conjunction with a professional learning process for educators. After launching the questionnaire and knowledge test, these teachers guided students through a reflection process on the results. The teachers then provided feedback to the researchers regarding students' depth of reflection and usefulness of the results attributed to the assessments. These teachers also identified specific instructional activities they could undertake to enhance the skills of students related to specific knowledge items. This action-oriented reflection is a primary purpose of the formative assessments.

Structural Validity. Factor analyses with scree plots of both the questionnaire and knowledge test were conducted to examine the correlations among items. Both measures were determined to assess a single construct. All items on the knowledge test were strong predictors of performance (i.e., high-performing students performed better at the individual item level).

Generalizability Validity. While assessed through different methods, all measures in this suite evaluate the construct of self-efficacy. The Self-Efficacy Questionnaire focuses on self-reported behaviors while the Self-Efficacy Knowledge Test assesses knowledge of core constructs. Positive correlations between these measures were statistically significant (0.218), as determined for a sample of 1703 youth. Generalizability validity data will be collected and analyzed regarding the performance-based observation and reflection.

Fairness. Demographic data collected through the questionnaire and knowledge test includes gender and grade level. No statistical differences were found between males and females on the average ratings for the Self-Efficacy Formative Questionnaire. Females did perform better on the Self-Efficacy Knowledge Test than males (mean of 71% as opposed to 67%); 16% of the variance in knowledge scores can be accounted for by gender. Additional analyses will be performed among schools with high and low free/ and reduced lunch rates, diversity levels, or urbanicity classifications. Race, ethnicity, and poverty differences at the individual student level have not been tested as these demographics are not collected through the assessments.

Consequential Validity. The measures have not yet been used as predictive variables. Research shows that students with stronger self-efficacy perform better in school and take on more challenges (Bandura, 1989; Mercer et al., 2011; Snipes et al., 2012). The data from the Self-Efficacy assessments could be analyzed in conjunction with performance and behavior data collected at the school level to determine the consequential validity and predictive applications of these measures.

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Appendix A: Self-Efficacy Questionnaire Items

Each item is rated on a Likert-type scale from 1 (*Not Very Like Me*) to 5 (*Very Like Me*). Items that are framed negatively, and therefore reverse scored, are designated with “N.”

1. If I worked at it, I could learn just about any skill. (Focus)
2. I feel discouraged when I’m told I did something incorrectly. (Focus, N)
3. Once I’ve decided to accomplish something, I keep trying, even if it is harder than I thought. (Focus)
4. I believe that the brain can be developed like a muscle. (Focus)
5. I can always get better, even if I am really good at something. (Focus)
6. I think people should realize when they aren’t good at something and quit. (Focus, N)
7. I’m willing to work on something challenging, even if I know it will take a lot of effort and I may not succeed at first. (Focus)
8. I see making mistakes as a normal part of learning. (Focus)
9. When I receive feedback that I didn’t do well on something, I try even harder to learn it. (Focus)
10. I want to quit when I’m told I did something incorrectly. (Focus, N)
11. When I’m struggling to accomplish something difficult, I focus on my progress. (Steps)
12. When a task sounds very hard, I tell myself that I can do hard things. (Steps)
13. I have negative thoughts about myself when I make mistakes. (Steps, N)
14. It helps me to learn from other people’s stories of success. (Steps)
15. When facing a new challenge, I think about goals that I’ve accomplished successfully. (Steps)
16. Sometimes I give up when I’m afraid I can’t do something. (Steps, N)
17. When I am having trouble learning a new skill, I get advice from people I know. (Steps)
18. When facing a new challenge, I think about what I did to succeed in other difficult situations. (Steps)
19. When I hear about how others overcame difficulties, I feel like I can succeed too. (Steps)
20. I can calm myself down when I’m anxious about something. (Steps)
21. When I’m told I did something incorrectly, I try even harder to get it right. (Steps)
22. I use feedback to get better. (Steps)
23. When given a choice, I usually take the easiest option. (Steps, N)
24. I like to challenge myself to learn new things. (Steps)

Appendix B: Self-Efficacy Knowledge Test Items

Each item is scored as correct or incorrect; see the section outlining administering the formative assessment and knowledge test for directions, including automatic scoring through <http://ResearchCollaborationSurveys.org>.

True or False

25. ____ Making mistakes (and putting in effort to learn from them) strengthens neuropathways in your brain.
26. ____ If you get straight A's in school, you automatically have strong self-efficacy.
27. ____ Self-efficacy is something you're born with. Either you have it or you don't.
28. ____ You can use strategies to increase your self-efficacy when approaching a challenging task.
29. ____ Self-efficacy is important for academics but isn't relevant to things like sports or music.

Multiple Choice

30. Choose the best definition of self-efficacy.
 - a. Believing that you can easily accomplish anything you attempt, because you're a quick learner and you often succeed in classes or other pursuits.
 - b. Self-esteem, which is confidence in yourself and an overall satisfaction with your abilities.
 - c. Believing in your ability to accomplish specific, challenging tasks – including understanding that your ability can grow with effort.
 - d. Believing in your ability to accomplish your goals in areas/subjects where you have a natural aptitude.
31. When talking to a friend, which of the following statements would support them in building their self-efficacy?
 - a. Ability grows with effort
 - b. Practice makes perfect
 - c. Accept that you aren't good at this and find something you are better at
 - d. You are naturally talented at this
32. Which of these helps build self-efficacy?
 - a. Focusing on your failures
 - b. Focusing on your natural talents
 - c. Learning from others
 - d. Competition
33. You know that succeeding at a challenging task helps increase your self-efficacy. Select the choice that best describes why this is the case.
 - a. After succeeding at a challenging task, you are confident, and you have developed high self-efficacy in all challenging tasks.
 - b. You have demonstrated your self-worth by succeeding at the challenging task.
 - c. Succeeding at a challenging task helps you stand out from others, resulting in improved self-esteem.
 - d. Succeeding at a challenging task shows that your effort helped you become more skilled, which reinforces your growth mindset.
34. Which of these things is NOT likely to be a result of improving your self-efficacy?
 - a. Increased ability to view mistakes and constructive criticism as opportunities to learn
 - b. Increased ability to succeed at new tasks on the first try
 - c. Increased willingness to take on (and persist in) challenging tasks
 - d. Increased confidence in your own abilities
35. Which best describes how self-efficacy can make someone a better learner?

- a. When you make mistakes, you learn to focus on things that you learn easily.
- b. Students with higher levels of self-efficacy understand that they have to put in effort in order to learn, so they will work harder.
- c. Students with higher levels of self-efficacy get more encouragement from teachers, creating a continual loop of increased teacher expectation leading to increased learning.
- d. Students with higher levels of self-efficacy are more skilled than other students and therefore more motivated to achieve.

36. Which of these behaviors helps build self-efficacy?

- a. Comparing the success of others to my struggles and using the resulting feelings of failure as a motivation technique.
- b. Recognizing when I’m using negative self-talk and then switching to a different task or activity.
- c. Trusting myself, and disregarding suggestions/feedback from my friends or teachers.
- d. Before approaching new challenging tasks, thinking about similar tasks that I’ve successfully completed.

37. **Scenario:** Florence decided to take Astronomy to meet a science requirement her freshman year of college. She knew that it would be challenging, but she wasn’t prepared for the majority of the coursework to focus on complex math. Three weeks into the class, she gets an F on the first test. She’s worried that she won’t be able to pass the class. She feels frustrated and stupid, and she’s not sure what to do. Using what you’ve learned about self-efficacy, choose the best option for how Florence should proceed.

- a. Florence decides that the reason she did so poorly on the test is that she got too anxious. She is going to take five deep breaths before the next test. She would go to study sessions, but she does not want anyone else to know that she is struggling.
- b. Florence decides to ask around to see if she can find someone who has taken the class. They could tell her whether the class gets easier or if she should drop the class.
- c. Florence decides that she can succeed with effort. She starts going to the weekly study sessions the teacher offers, doing more practice problems, and asking questions when she doesn’t understand something.
- d. Several friends warned Florence that Astronomy would be difficult and suggested meeting the science requirement with something easier. Florence decides to drop Astronomy and take Geography instead.

Identify whether each of these behaviors/attitudes are characteristic of a growth mindset or a fixed mindset.

38. Skills/abilities are something you’re born with or you’re not.	Growth Mindset	Fixed Mindset
39. Attempting challenging tasks is how we learn.	Growth Mindset	Fixed Mindset
40. “I’m good at reading, but I just can’t do math.”	Growth Mindset	Fixed Mindset
41. “My friend is so smart; I’ll never be that smart.”	Growth Mindset	Fixed Mindset
42. Honest, constructive feedback helps you identify areas where you need to improve.	Growth Mindset	Fixed Mindset
43. Be open to new challenges but admit when you just aren’t good at something and move on to a new challenge.	Growth Mindset	Fixed Mindset
44. Mistakes are valuable because we can learn from them.	Growth Mindset	Fixed Mindset

45. Imagine that you are facing a challenge and you are not sure you can be successful. Name three things you could do to raise your belief in yourself.

Appendix C: Self-Efficacy Performance-Based Observation Items

Based on observations across time or in specific situations, the educator rates each student’s self-efficacious behaviors on 4-point scale. This assessment can be used at purposeful intervals to monitor the development of each student.

<p>Based on observations across time or in specific situations, evaluate each student’s performance.</p> <p>Beginning: Not yet able to demonstrate without scaffolding.</p> <p>Emerging: Minimal or superficial demonstration; prompting likely required.</p> <p>Proficient: Sufficient demonstration including self-appraisal and detailed, personalized application.</p> <p>Advanced: Independent and consistent demonstration; teaches/prompts others.</p> <p>Not observed is documented if there has not been the opportunity to observe the behavior performed by an individual student.</p>					
Self-Efficacy Sequence Indicators	Beginning	Emerging	Proficient	Advanced	Not Observed
1. Demonstrates an understanding that making mistakes is normal.					
2. Continues work on a challenging task by trying different ways to solve a problem.					
3. Demonstrates approaching a challenging task with recognition that ability grows with effort.					
4. Demonstrates verbal persuasion and growth mindset self-talk.					
5. Self-assesses (i.e., connects) level of efficacy, effort, and amount of learning applied to specific tasks/knowledge.					
6. Utilizes mindful practices to self-calm and focus.					

Appendix D: Self-Efficacy Performance-Based Reflection Items

For specific projects, assignments, or preparation (e.g., studying for a test, enhancing performance in a sport), students reflect on their self-efficacy behaviors by rating their performance on a 3-point scale. This assessment can be used at purposeful intervals to monitor each student’s performance and growth.

For the task of _____, rate your self-efficacy.

Source	Low Self-Efficacy	Moderate Self-Efficacy	High Self-Efficacy
Mastery Experience	I couldn’t relate my past successes to how I could succeed at this task. It was difficult for me to see mistakes as opportunities to learn. When I made a mistake, I felt like I was just going to keep making mistakes.	I could somewhat see how past successes exemplified my ability to succeed at this task with effort. Although I understood that mistakes are opportunities to learn, when it came to this task, I struggled to apply this concept.	I thought about how I have succeeded in the past, and how the mistakes I have made were opportunities to learn. I reminded myself that our brains have neuroplasticity, and that practice strengthens neuropathways making my brain more efficient and stronger.
Verbal Persuasion	I had difficulty accepting positive feedback and constructive criticism.	I could accept positive praise, but still struggled to take constructive criticism or vice versa.	I accepted positive praise, while considering how I could learn from the constructive feedback I was given.
Physiological Feedback	I had difficulty recognizing and/or reducing my anxiety. My feelings overwhelmed me.	I was able to recognize and reduce my anxiety to a point, although I still felt like I could have done better had I worked on relaxation techniques more.	I was able to recognize and reduce any anxiety I was feeling through practicing relaxation techniques, writing down worries, physical activity, or positive self-talk.
Vicarious Experiences	I was unable to relate other people’s success to my own success. When I thought about other’s success, I felt worse about myself.	I was able to use other people’s success to feel more confident, but I still sometimes felt competitive or defensive.	I reminded myself that if my friends and/or people I admire can succeed, I can too.

Apéndice A: Elementos del cuestionario de autoeficacia

Cada elemento se clasifica en una escala tipo Likert de 1 (*Para nada igual a mí*) a 5 (*Muy igual a mí*).

1. Si me esforzara, podría aprender sobre cualquier habilidad.
2. Me siento desalentado cuando me dicen que hice algo incorrectamente.
3. Cuando decido lograr algo, sigo intentando, incluso si es más difícil de lo que pensaba.
4. Creo que el cerebro puede desarrollarse como un músculo.
5. Siempre puedo mejorar, incluso si soy realmente bueno en algo.
6. Creo que la gente debería darse cuenta cuando no es buena en algo y abandonarlo.
7. Estoy dispuesto a trabajar en algo desafiante, incluso si sé que tomará mucho esfuerzo y que no tenga éxito al principio.
8. Veo cometer errores como una parte normal del aprendizaje.
9. Cuando recibo comentarios de que no hice algo bien, intento mucho más aprenderlo.
10. Quiero darme por vencido cuando me dicen que hice algo incorrectamente.
11. Cuando me esfuerzo para lograr algo difícil, me concentro en mi progreso.
12. Cuando una tarea suena muy difícil, me digo que puedo hacer cosas difíciles.
13. Tengo pensamientos negativos acerca de mí mismo cuando cometo errores.
14. Me ayuda aprender de las historias de éxito de otras personas.
15. Cuando me enfrento a un nuevo desafío, pienso en los objetivos que he logrado con éxito.
16. A veces me doy por vencido cuando tengo miedo de no poder hacer algo.
17. Cuando tengo problemas para aprender una nueva habilidad, recibo consejos de personas que conozco.
18. Al afrontar un nuevo reto, pienso en lo que hice para tener éxito en otras situaciones difíciles.
19. Cuando oigo hablar de cómo otros superaron dificultades, siento que puedo tener éxito también.
20. Puedo calmarme cuando estoy ansioso por algo.
21. Cuando me dicen que hice algo incorrectamente, me esfuerzo aún más para hacerlo bien.
22. Utilizo los comentarios para mejorar.
23. Cuando se me da una opción, normalmente tomo la opción más fácil.
24. Me gusta desafiarme a aprender cosas nuevas.

Apéndice B: Elementos de la prueba de conocimiento de autoeficacia

Cada elemento se puntúa como correcto o incorrecto; consulte la sección que describe cómo administrar la evaluación formativa y la prueba de conocimiento para ver instrucciones, incluyendo la puntuación automática en <http://ResearchCollaborationSurveys.org>.

Verdadero o falso

1. ____ Cometer errores (y poner en esfuerzo para aprender de ellos) fortalece las vías neuronales en el cerebro.
2. ____ Si sus calificaciones son A en la escuela, automáticamente tiene autoeficacia.
3. ____ La autoeficacia es algo con lo que se nace. Se tiene o no se tiene.
4. ____ Usted puede usar estrategias para aumentar su autoeficacia al abordar una tarea desafiante.
5. ____ La autoeficacia es importante para los aspectos académicos, pero no es relevante para cosas como deportes o música.

Opción múltiple

6. Elija la mejor definición de autoeficacia.
 - a. Creer que puede lograr fácilmente cualquier cosa que se proponga, porque aprende rápido y con frecuencia tiene éxito en clases u otras actividades.
 - b. Autoestima, que es confianza en uno mismo y la satisfacción general con las habilidades personales.
 - c. Creer en su capacidad para realizar tareas específicas y desafiantes, incluyendo la comprensión de que su capacidad puede crecer con el esfuerzo.
 - d. Creer en su capacidad para alcanzar metas en áreas/temas donde tiene una aptitud natural.
7. Al hablar con un amigo, ¿cuál de las siguientes afirmaciones le ayudaría a desarrollar su autoeficacia?
 - a. La capacidad crece con el esfuerzo.
 - b. La practica perfecciona.
 - c. Acepta que no eres bueno en esto y encuentra otra cosa en la que seas mejor.
 - d. Eres naturalmente talentoso en eso.
8. ¿Cuál de las siguientes ayuda a desarrollar la autoeficacia?
 - a. Centrarse en sus fracasos
 - b. Centrarse en sus talentos naturales
 - c. Aprender de los demás
 - d. Competencia
9. Usted sabe que tener éxito en una tarea desafiante ayuda a aumentar su autoeficacia. Seleccione la opción que mejor describa por qué esto es así.
 - a. Después de tener éxito en una tarea difícil, se siente seguro y ha desarrollado una alta autoeficacia en tareas desafiantes.
 - b. Usted ha demostrado su autoestima al tener éxito en la tarea desafiante.
 - c. Tener éxito en una tarea desafiante le ayuda a destacar de los demás, lo que tiene como resultado una mejor autoestima.
 - d. Tener éxito en una tarea desafiante muestra que su esfuerzo le ayudó a ser más habilidoso, lo que refuerza su mentalidad de crecimiento.
10. ¿Cuál de estas cosas es probable que no sea el resultado de mejorar su autoeficacia?
 - a. Mayor capacidad para ver los errores y las críticas constructivas como oportunidades de aprender.
 - b. Mayor capacidad para tener éxito en nuevas tareas en el primer intento.
 - c. Mayor disposición a asumir (y persistir) tareas difíciles.
 - d. Mayor confianza en sus propias habilidades.
11. ¿Qué describe mejor cómo la autoeficacia puede hacer que alguien aprenda mejor?
 - a. Cuando usted comete errores, aprende a centrarse en cosas que aprende fácilmente.

- b. Los estudiantes con niveles más altos de autoeficacia entienden que tienen que poner esforzarse para aprender, por lo que trabajan más.
 - c. Los estudiantes con niveles más altos de autoeficacia reciben más aliento de los maestros, creando un bucle continuo de expectativas crecientes de los maestros que conducen a un mayor aprendizaje.
 - d. Los estudiantes con niveles más altos de autoeficacia son más calificados que otros estudiantes y por lo tanto están más motivados a tener logros.
12. ¿Cuál de los siguientes comportamientos ayuda a desarrollar la autoeficacia?
- a. Comparar el éxito de otros con mis dificultades y usar los sentimientos de fracaso resultantes como técnica de motivación.
 - b. Reconocer cuando tengo un diálogo interno negativo y luego cambiar a una tarea o actividad diferente.
 - c. Tener confianza en mí mismo e ignorar sugerencias y comentarios de mis amigos o maestros.
 - d. Antes de abordar nuevas tareas desafiantes, pensar en tareas similares que he completado con éxito.
13. **Escenario:** Florence decidió tomar Astronomía para cumplir con un requisito de ciencia su primer año de universidad. Sabía que sería un reto, pero no estaba preparada para que la mayoría de los cursos se centraran en matemáticas complejas. Tres semanas después de la clase, ella obtiene una F en la primera prueba. Le preocupa no poder aprobar la clase. Se siente frustrada y estúpida, y no está segura de qué hacer. Utilizando lo que ha aprendido sobre la autoeficacia, elija la mejor opción para cómo debería proceder Florence.
- a. Florence decide que la razón por la que lo fue tan mal en la prueba es que se puso demasiado ansiosa. Va a respirar profundamente cinco veces antes de la siguiente prueba. Ella irá a las sesiones de estudio, pero no quiere que nadie más sepa que tiene dificultades.
 - b. Florence decide preguntar para ver si puede encontrar a alguien que haya tomado la clase. Podrían decirle si la clase se vuelve más fácil o si debe abandonarla.
 - c. Florence decide que puede tener éxito con esfuerzo. Comienza a ir a las sesiones de estudio semanales que ofrece el docente, hacer más problemas de práctica y hacer preguntas cuando no entiende algo.
 - d. Varios amigos advirtieron a Florence que la Astronomía sería difícil y sugirieron cumplir con los requisitos de ciencia con algo más fácil. Florence decide abandonar Astronomía y tomar Geografía en su lugar.

Identifique si cada uno de estos comportamientos/actitudes son característicos de una mentalidad de crecimiento o una mentalidad fija.

14. Las habilidades y la capacidad son algo con lo que se nace o no.	Mentalidad fija	Mentalidad de crecimiento
15. Aprendemos cuando intentamos tareas desafiantes.	Mentalidad fija	Mentalidad de crecimiento
16. “Soy bueno en lectura, pero no soy bueno en matemáticas.”	Mentalidad fija	Mentalidad de crecimiento
17. “Mi amigo es tan inteligente; nunca seré tan inteligente.”	Mentalidad fija	Mentalidad de crecimiento
18. Los comentarios honestos y constructivos le ayudan a identificar las áreas en las que necesita mejorar.	Mentalidad fija	Mentalidad de crecimiento
19. Esté abierto a nuevos desafíos, pero admita cuando no sea bueno en algo y pase a un nuevo desafío.	Mentalidad fija	Mentalidad de crecimiento
20. Los errores son valiosos porque podemos aprender de ellos.	Mentalidad fija	Mentalidad de crecimiento

21. Imagínesse que está enfrentando un desafío y no está seguro de que pueda tener éxito. Nombre tres cosas que podría hacer para mejorar su confianza en sí mismo.

Apéndice D: Elementos de reflexión basados en el desempeño de la autoeficacia

Para proyectos específicos, tareas o preparación (por ejemplo, estudiar para una prueba, mejorar el desempeño en un deporte), los estudiantes reflexionan sobre sus comportamientos de autoeficacia al evaluar su desempeño en una escala de 3 puntos. Esta evaluación se puede utilizar a intervalos determinados para supervisar el desempeño y el crecimiento de cada estudiante.

Para la tarea de _____, califique su autoeficacia.

Fuente	Autoeficacia baja	Autoeficacia moderada	Autoeficacia alta
Experiencia de dominio	No pude relacionar mis éxitos pasados con cómo podría tener éxito en esta tarea. Me fue difícil ver mis errores como oportunidades de aprender. Cuando cometí un error, sentí que iba a seguir cometiendo errores.	Pude ver cómo de alguna manera mis ejemplos del pasado ejemplificaron mi capacidad para tener éxito en mi tarea con esfuerzo. Aunque entendí que los errores son oportunidades de aprender, cuando se trata de esta tarea, tuve dificultades para aplicar este concepto.	Pensé en cómo he tenido éxito en el pasado, y cómo los errores que he cometido eran oportunidades de aprender. Me recordé a mí mismo que nuestros cerebros tienen neuroplasticidad, y que la práctica fortalece las vías neuronales haciendo que mi cerebro sea más eficiente y más fuerte.
Persuasión verbal	Tuve dificultades para aceptar comentarios positivos y críticas constructivas.	Pude aceptar elogios positivos, pero seguí teniendo problemas para aceptar las críticas constructivas o viceversa.	Acepté elogios positivos, al tiempo que consideré qué podía aprender de los comentarios constructivos que me dieron.
Retroalimentación fisiológica	Tuve dificultades para reconocer o reducir mi ansiedad. Mis sentimientos me abrumaron.	Pude reconocer y reducir mi ansiedad hasta un punto, aunque seguí sintiendo que podría haberlo hecho mejor si hubiera trabajado más en técnicas de relajación.	Pude reconocer y reducir cualquier ansiedad que sentía a través de la práctica de técnicas de relajación, escribir mis preocupaciones, la actividad física, o el diálogo interno positivo.
Experiencias indirectas	No pude relacionar el éxito de otras personas con mi propio éxito. Cuando pensé en el éxito de otros, me sentí peor acerca de mí mismo.	Pude utilizar el éxito de otras personas para sentirme más seguro, pero a veces me sentí competitivo o a la defensiva de todas formas.	Me recordé a mí mismo que si mis amigos o la gente que admiro pueden tener éxito, yo también puedo.