

Self-Regulation Assessment Suite Technical Report

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Defining Self-Regulation

“Self-regulation is the ability to plan, self-evaluate, and adjust your course of action for improved outcomes” (Noonan & Gaumer Erickson, 2018a, p. 51). To self-regulate, an individual must proactively apply self-directive processes, cognitive behaviors, and emotions to attain goals, learn skills, and manage emotional reactions (Abar & Loken, 2010; Zimmerman & Schunk, 2011). Self-regulated learners are “metacognitively, motivationally, and behaviorally active participants in their own learning process” (Zimmerman, 1986, as cited in Zimmerman, 2008, p. 167). The self-regulation process can be described as making a plan, monitoring that plan, making changes to stay on track, and reflecting on the process and outcome (Gaumer Erickson & Noonan, 2016).

To self-regulate, students must enact a proactive, self-directed process for attaining goals, learning skills, managing emotional reactions, and accomplishing tasks. The Self-Regulation Assessment Suite measures a student’s knowledge, perceived level of proficiency, and performance across the four essential components of self-regulation:

1. **Plan** for and articulate what you want to accomplish.
2. Immediately **monitor** progress and interference regarding your goal.
3. **Adjust** by implementing specific strategies when things are not going as planned.
4. **Reflect** on what worked and what you can do better next time (Noonan & Gaumer Erickson, 2018a).

The Assessment Suite

Self-regulation 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-Regulation Formative Questionnaire should not be used as a pre/post measure. As students learn more about self-regulation, 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., Monroe, K., Soukup, J., & Noonan, P. M. (2018). Self-regulation formative questionnaire. In P. Noonan & A. Gaumer Erickson. *The skills that matter: Teaching interpersonal and intrapersonal competencies in any classroom* (p. 177–178). Corwin.

Knowledge Test. This curriculum-based measure assesses students' knowledge of self-regulation components and their ability to judge the most effective course of action when applying these concepts. The test includes multiple-choice, yes/no, true/false, situational judgement, and short-answer items. The Self-Regulation Knowledge Test is directly aligned with lessons provided in *Teaching Self-Regulation 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-regulation lessons. 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 B for Knowledge Test items.

The test can be cited as: Gaumer Erickson, A. S., Noonan, P. M., Loewenstein, M., & Monroe, K. (2019). Self-regulation knowledge test. In A. Gaumer Erickson, P. Noonan, & M. Loewenstein (2019). *Teaching self-regulation in middle and high school classrooms* (2nd ed.; p. 3–5) [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-Regulation 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-regulatory 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: Gaumer Erickson, A. S. & Noonan, P. M. (2018). Self-regulation performance-based observation. Derived from Noonan, P. M. & Gaumer Erickson, A. S. (2018). *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-regulatory behaviors within authentic situations. This four-item rubric guides students to determine the quality of their planning, monitoring, adjusting, and reflecting 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-Regulation 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: Gaumer Erickson, A. S. & Noonan, P. M. (2021). Self-regulation performance-based reflection. In A. Gaumer & P. Noonan. (in press). *Teaching the skills that matter: 75 instructional activities that develop adolescents' self-regulation*. Solution Tree.

Administering the Formative Questionnaire and Knowledge Test

Teachers can simultaneously launch the Self-Regulation Formative Questionnaire and Knowledge Test by visiting <http://ResearchCollaborationSurveys.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 as well as 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 to the survey (<http://is.gd/rcsurveys>) and a unique survey code; both the URL and survey code are provided on the website when a survey is added to the teacher's portfolio. 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 they self-regulate right now, determine their knowledge of self-regulation concepts, and promote reflection on their ability to identify how best to apply self-regulation 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 survey link and code. If possible, provide the link digitally to save time. 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 1–28, 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 self-regulate in various situations to work toward or accomplish tasks. For instance, they might consider how often they submitted course assignments on time, how they planned out and completed assigned projects over time, or how well they accomplished personal goals like saving money or improving in a sport.

Here are some example items from the survey:

- I plan out projects that I want to complete.
- I keep track of how my projects are going.
- As soon as I see things aren't going right, I want to do something about it.
- I think about how well I've done in the past when I set new goals.

Tell students that items 29–49 test knowledge of self-regulation concepts and potential ways to effectively self-regulate 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 will be displayed with the associated component and student's rating. Have students list the components from highest to lowest using their scores. If two scores are the same, students can choose which component they feel is stronger for them. Then, for the top two components, have students identify a questionnaire item that is a strength. For the lowest two components, have students identify a questionnaire item that is an area for improvement.

Finally, have students write down their knowledge score. This score is in the first sentence under the Self-Regulation Knowledge Summary section. Additional instructions for facilitating students' reflection and using the Self-Regulation Formative Questionnaire and the Knowledge Test results are provided in *Teaching Self-Regulation 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 <http://ResearchCollaborationSurveys.org>, scroll to the list of My Surveys and click on the View button to open the teacher view for the survey. First, you'll see a composite graph of students' scores on each component and self-regulation overall, which is followed by a breakdown of student responses. The last section provides students' responses to the essay question: *Imagine that you are struggling to learn a concept in math. Provide brief descriptions of how you would address the first two components of self-regulation to work toward improving your learning.* Assign points on a scale of 0–3, giving a point for each distinct action directly related to self-regulation.

Using the Results. Results by component (i.e., plan, monitor, adjust, reflect) support reflection on relative strengths and areas for improvement. Students can use the questionnaire results to gain an understanding of the various elements necessary for self-regulation. They can reflect on their individual results to improve self-regulatory behaviors that they, based on their own reporting, have identified as areas for growth. Students can also discuss self-regulation with others and begin to apply this knowledge to their own experiences.

By determining the areas of the self-regulation to pinpoint, teachers can enhance their instructional practices through targeted instruction (see *Teaching Self-Regulation in Middle and High School Classrooms*). After facilitating continual guided and independent practice with feedback, teachers can readminister the Self-Regulation Formative Questionnaire and the Self-Regulation Knowledge Test, and based on the results, alter instruction to further bolster students' self-regulation 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' fundamental abilities to plan what they want to accomplish, monitor their own progress, adjust their plans as needed, and reflect on progress toward their goals and the actions that helped them make that progress.

Administering the Performance-Based Observation & Reflection

The Self-Regulation 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-regulation behaviors. *Teaching Self-Regulation 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 their proficiency on the self-regulation 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-Regulation Formative Questionnaire was initially tested for reliability using Cronbach's coefficient alpha with 1,354 responses from middle school and high school students in 2015 (28 items; $\alpha = .889$). Exploratory factor analysis (EFA) was performed to test the concept homogeneity, revealing that the questionnaire measured a single factor, referred to as self-regulation. Revisions were made to shorten the questionnaire while maintaining acceptable internal consistency. The 22-item Self-Regulation Formative Questionnaire was tested for reliability using Cronbach's coefficient alpha. Demographic data of grade and gender were added to the questionnaire in fall 2017. Of the 12,882 responses that were completed between August 2017 and March 2019, 6,057 (47%) were female, 6,055 (47%) were male, and 770 (6%) did not report gender. The dataset includes 1,162 responses from sixth-grade students; 2,067 from seventh grade; 1,605 from eighth grade; 1,980 from ninth grade; 1,524 from 10th grade; 1,407 from 11th grade; 1,528 from 12th grade; and 1,609 post-high school. The overall Self-Regulation Formative Questionnaire was found to be highly reliable (22 items; $\alpha = .894$), and factor analyses supported the scale as measuring a single construct. Internal consistency above $\alpha = .86$ was maintained for grade level and gender subgroup analyses. When converted to a 100-point scale, the bottom quartile ranged from 20 to 64, and the top quartile ranged from 81 to 100. To guide students' reflection, items are loosely grouped into four categories representing the self-regulation process.

The Self-Regulation Knowledge Test was tested for reliability using Cronbach's coefficient alpha with 345 students in grades 9–12. The analysis showed that Item 9 did not support the construct; post-deletion reliability estimates were acceptable (19 items; $\alpha = .81$).

The Self-Regulation Performance-Based Observation and Reflection have not yet been tested for reliability.

Content Validity. Construction of the measures began in 2015 after a thorough review of literature on self-regulation, including the related terms of self-management, executive functioning, goal-directed action, agency, and time management. Abbreviated literature reviews (elementary and secondary research guides) were developed and are available at <http://cccframework.org/resources.html>. Existing measures, including the Motivated Strategies for Learning Questionnaire (Pintrich et al., 1993), Self-Regulated Learning Interview Schedule (Zimmerman & Martinez-Pons, 1988), Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995), and the Self-Regulation Strategy Inventory (Cleary, 2006) were reviewed by a team of researchers. Items were constructed and categorized into the four research-based aspects of self-regulation. 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 questionnaire items were tested in 2015 with eight 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 2015 with 1,354 students in conjunction with a professional learning process for educators. After launching the questionnaire, 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.

The Knowledge Test items underwent a similar process with initial testing using a think-aloud format with three adolescents. Prior to public release, beta testing was conducted with 150 students in one school. A focus group

with educators at this school determined the perceived accuracy of results among students and educators. 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 screen 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 but two items on the knowledge test were strong predictors of overall performance (i.e., high-performing students performed better at the individual item level). Items 2 and 3 discriminated negatively.

Generalizability Validity. While assessed through different methods, all measures in this suite evaluate the construct of self-regulation. The Self-Regulation Formative Questionnaire focuses on self-reported behaviors while the Self-Regulation Knowledge Test assesses knowledge of core constructs. Correlations between these measures are acceptable (0.36), as determined for a sample of 345 students in Grades 9–12. 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 include gender and grade level. Overall, females report higher self-regulatory behaviors than males. Females also score higher on the knowledge test than males. Statistically significant, but not functionally significant effect-size differences were found across grade levels. No significant differences were found among schools based on 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. Grade point average as an indicator of course performance has been described in the research as a key outcome variable associated with self-regulation (Dignath et al., 2008; Nota et al., 2004; Ursache et al., 2012; Zimmerman, 2008). Three studies were conducted in 2019–2021 in which the Self-Regulation Questionnaire and Knowledge Test results were analyzed as predictive of grade point average (GPA) for high school students (Gaumer Erickson, Noonan, & Brussow, 2021). Study 1, conducted with 345 students in a high school with an 88% White population, found that when used as a predictive variable for Fall 2019, Quarter 1, GPA, the composite questionnaire score predicted 24% of the variance in GPA (significant at the .001 confidence level); the composite knowledge test score predicted 11% of the variance in GPA (significant at the .001 confidence level); and a combination of the questionnaire and knowledge test predicted 28% of the variance in end-of-quarter GPA (significant at the .001 confidence level). Study 2, conducted with 192 students in a high school with an 86% Hispanic population, found that when used as a predictive variable for Fall 2020 semester GPA, the composite questionnaire score predicted 15% of the variance in GPA (significant at the .001 confidence level); the composite knowledge test score predicted 4% of the variance in GPA (significant at the .01 confidence level); and a combination of the questionnaire and knowledge test predicted 19% of the variance in end-of-semester GPA (significant at the .001 confidence level). Study 3, conducted with 726 students in a high school with an 68% Hispanic and 22% White population, found that when used as a predictive variable for cumulative GPA, the composite questionnaire score predicted 12% of the variance in GPA (significant at the .001 confidence level); the composite knowledge test score predicted 7% of the variance in GPA (significant at the .001 confidence level); and a combination of the questionnaire and knowledge test predicted 17% of the variance in cumulative GPA (significant at the .001 confidence level).

References

- Abar, B., & Loken, E. (2010). Self-regulated learning and self-directed study in a pre-college sample. *Learning and Individual Differences, 20*(1), 25–29. <https://doi.org/10.1016/j.lindif.2009.09.002>
- Cleary, T. J. (2006). The development and validation of the self-regulation strategy inventory—self-report. *Journal of School Psychology, 44*(4), 307–322. doi: 10.1016/j.jsp.2006.05.002
- Gaumer Erickson, A. S. & Noonan, P. M. (2021). *Self-regulation assessment suite: Technical report*. College & Career Competency Framework. <http://cccframework.org>

- Dignath, C., Buettner, G., & Langfeldt, H. P. (2008). How can primary school students learn self-regulated learning strategies most effectively? A meta-analysis on self-regulation training programmes. *Educational Research Review*, 3(2), 101–129. doi: 10.1016/j.edurev.2008.02.003
- Gaumer Erickson, A. S., Monroe, K., Soukup, J., & Noonan, P. M. (2018). Self-regulation formative questionnaire. In P. Noonan & A. Gaumer Erickson. *The skills that matter: Teaching interpersonal and intrapersonal competencies in any classroom* (p. 177–178). Corwin.
- Gaumer Erickson, A. S. & Noonan, P. (2016). *Research Guide: Self-Regulation*. College & Career Competency Framework. <http://www.cccframework.org>
- Gaumer Erickson, A. S. & Noonan, P. M. (2018). Self-Regulation performance-based observation. Derived from Noonan, P. M. & Gaumer Erickson, A. S. (2018). *College and Career Competency Sequence*. College & Career Competency Framework. <http://cccframework.org>
- Gaumer Erickson, A. S. & Noonan, P. M. (2019). *Teaching self-regulation in middle and high school classrooms* (2nd ed.) [Teacher lessons and student workbook]. College & Career Competency Framework. <https://nge.selz.com/>
- Gaumer Erickson, A. S. & Noonan, P. M. (2021). Self-regulation performance-based reflection. In A. Gaumer & P. Noonan. (in press). *Teaching the skills that matter: 75 instructional activities that develop adolescents' self-regulation*. Solution Tree.
- Gaumer Erickson, A. S., Noonan, P. M., & Brussow, J. (2021) Self-regulation as a predictor of GPA in high school. Submitted for publication.
- Gaumer Erickson, A. S., Noonan, P. M., Loewenstein, M., & Monroe, K. (2019). Self-regulation knowledge test. In *Teaching self-regulation in middle and high school classrooms* (2nd ed.; p. 3–5) [Teacher lessons and student workbook]. College & Career Competency Framework. <https://nge.selz.com/>
- Kincaid, J. P., Fishburne, R. P., Rogers, R. L., & Chissom, B. S. (1975). Derivation of new readability formulas (automated readability index, fog count, and Flesch reading ease formula) for Navy enlisted personnel. Research Branch Report 8–75. Chief of Naval Technical Training: Naval Air Station Memphis.
- Noonan, P. M., & Gaumer Erickson, A. S. (2018a). *The skills that matter: Teaching interpersonal and intrapersonal competencies in any classroom*. Corwin.
- Noonan, P. M., & Gaumer Erickson, A. S. (2018b). *Competency sequence: Self-regulation*. College & Career Competency Framework. <http://www.cccframework.org>
- Nota, L., Soresi, S., & Zimmerman, B. J. (2004). Self-regulation and academic achievement and resilience: A longitudinal study. *International Journal of Educational Research*, 41(3), 198–215.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement*, 53(3), 801–813.
- Ursache, A., Blair, C., & Raver, C. C. (2012). The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. *Child Development Perspectives*, 6(2), 122–128. doi: 10.1111/j.1750-8606.2011.00209.x
- Wehmeyer, M. L., & Kelchner, K. (1995). *The Arc's self-determination scale*. Arlington, TX: The Arc National Headquarters.
- Zimmerman, B. J. (1986). Becoming a self-regulated learner: Which are the key subprocesses? *Contemporary Educational Psychology*, 11(4), 307–313. [https://doi.org/10.1016/0361-476x\(86\)90027-5](https://doi.org/10.1016/0361-476x(86)90027-5)
- Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166–183. <https://doi.org/10.3102/0002831207312909>
- Zimmerman, B. J., & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology*, 80(3), 284–290.
- Zimmerman, B. J., & Schunk, D. H. (Eds.). (2011). *Educational psychology handbook series. Handbook of self-regulation of learning and performance*. Routledge/Taylor & Francis Group.
- Gaumer Erickson, A. S. & Noonan, P. M. (2021). *Self-regulation assessment suite: Technical report*. College & Career Competency Framework. <http://cccframework.org>

Appendix A: Self-Regulation Formative 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. I plan out projects that I want to complete. (Plan)
2. If an important test is coming up, I create a study plan. (Plan)
3. Before I do something fun, I consider all the things that I need to get done. (Plan)
4. I can usually estimate how much time my homework will take to complete. (Plan)
5. I have trouble making plans to help me reach my goals. (Plan; N)
6. I keep track of how my projects are going. (Monitor)
7. I know when I’m behind on a project. (Monitor)
8. I track my progress for reaching my goal. (Monitor)
9. I know what my grades are at any given time. (Monitor)
10. Daily, I identify things I need to get done and track what gets done. (Monitor)
11. I have trouble remembering all the things I need to accomplish. (Monitor; N)
12. I do what it takes to get my homework done on time. (Adjust)
13. I make choices to help me succeed, even when they aren't the most fun right now. (Adjust)
14. As soon as I see things aren’t going right, I want to do something about it. (Adjust)
15. I keep trying as many different possibilities as necessary to succeed. (Adjust)
16. I have difficulty maintaining my focus on projects that take a long time to complete. (Adjust; N)
17. When I get behind on my work, I often give up. (Adjust; N)
18. I think about how well I’m doing on my assignments. (Reflect)
19. I feel a sense of accomplishment when I get everything done on time. (Reflect)
20. I think about how well I’ve done in the past when I set new goals. (Reflect)
21. When I fail at something, I try to learn from my mistake. (Reflect)
22. I keep making the same mistake over and over again. (Reflect; N)

Appendix B: Self-Regulation 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>.

1. Choose the best description of self-regulation.
 - a. When you proactively plan for how to reach a goal, learn a skill, or accomplish a task.
 - b. When you proactively use a process (e.g., planning, monitoring the plan, making changes as needed, and reflecting) to reach a goal, learn a skill, or accomplish a task.
 - c. When you follow your teacher’s detailed directions (including making changes as suggested by your teacher and reflecting on your progress) for reaching a goal, learning a skill, or accomplishing a task.
 - d. When you make progress toward reaching a goal, learning a skill, or accomplishing a task.

Decide if each of the scenarios describes at least one component of self-regulation.

Scenario	Is it self-regulation?	
2. After school, your parent takes your phone and says you’ll get it back when your homework is done.	Yes	No
3. You want to improve your grade in English, so you check your grade every Friday to see if it has gotten better.	Yes	No
4. You write down the homework that you need to complete and check it off your list as you finish it, making sure to finish each assignment.	Yes	No
5. You were working on your math assignment and came to a problem that you didn’t know how to solve. You texted your friend for help, but he hasn’t responded, so you leave the answer blank.	Yes	No

6. Which of these things is **NOT** likely to be a result of improving your self-regulation?
 - a. Increased control of your learning and academic success
 - b. Increased ability to recognize and address your own mistakes
 - c. Increased ability to reach goals without encountering any barriers
 - d. Improved time management and organization
7. Identify the best example of using the self-regulation process to address problems with being late to school.
 - a. Telling a parent/guardian about the problem and asking for help to get you to school on time.
 - b. Setting an extra alarm tomorrow to make it more likely that you will get up on time; that should eliminate the problem.
 - c. Considering possible reasons for your tardiness (e.g., staying up too late, not gathering supplies until morning) and making a plan to address those things, including how to see if you’re making progress.
 - d. Deciding that now that you’re aware of the issue, you won’t have trouble tomorrow—you know you just need to get up with the alarm, instead of hitting snooze or turning it off; then you won’t be late.

Identify which self-regulation component (**plan, monitor, make changes, reflect**) each behavior addresses:

Behavior	Component			
8. Each day, crossing tasks off a to-do list as you finish them.	Plan	Monitor	Make Changes	Reflect
9. Recognizing when something isn’t working and immediately adjusting your actions to get back on track.	Plan	Monitor	Make Changes	Reflect
10. Thinking each day about successes, setbacks, and specific things you’ve learned.	Plan	Monitor	Make Changes	Reflect
11. Breaking down big goals into smaller pieces.	Plan	Monitor	Make Changes	Reflect
12. After encountering setbacks, looking for solutions and trying as many as needed.	Plan	Monitor	Make Changes	Reflect
13. Thinking about your past efforts when setting new goals.	Plan	Monitor	Make Changes	Reflect
14. Using specific ways to track your progress.	Plan	Monitor	Make Changes	Reflect

15. Which of these actions does not specifically address a self-regulation component?
- Creating a study plan for important tests or a timeline of tasks/steps for long-term projects.
 - Checking your grades every week to see how teachers have graded your performance on assignments, projects, and tests.
 - Knowing when you are behind on a task and figuring out the best steps to take to get back on track.
 - Having specific methods in mind for how you will measure your progress as you work towards a goal.
16. Which of these would you **NOT** use to monitor progress on your self-regulation plan?
- A graph showing your progress over time.
 - A journal where you describe daily progress and identify if you are on-track with on your plan.
 - A rubric to compare with your work to see if you are meeting the criteria.
 - A comparison of your progress to your friend's progress on the same project/assignment.
17. You are told to write an essay, due in 3 weeks. The last time you had a task like this, you didn't write it until the night before. Your grade wasn't very good, and you want to do better. Using what you've learned, choose the **best option**.
- Break the assignment down into the basic parts (e.g., choose a topic, outline the essay, write the essay, etc.), and estimate how much time each part takes. Work backwards to identify deadlines for each part. Afterward, reflect on the quality of your work.
 - Talk about the project with your friend Beth, who is great at planning how to space out work. Ask her what her timeline is for accomplishing the project, and make that your timeline, too. After you finish, reflect on how well you did.
 - See your teacher to discuss your difficulties with this type of assignment and ask what you should do differently this time. Follow the teacher's plan and timeline to complete each part of the assignment, getting back on track when necessary.
 - Break the assignment down into the basic parts and make a plan for each part. Note specific tasks and their deadlines. Check off tasks as completed. If behind, figure out how to get back on track. During and after, consider what works and what could be improved.

True or False

18. ___ Self-regulation is important for academics, but it doesn't really help improve athletic or musical ability.
19. ___ Building your self-regulation skills can also help improve your goal setting abilities.
20. ___ Using self-regulation can help you resist distractions.

Open Ended

21. Imagine that you are struggling to learn a concept in math. Provide brief descriptions of how you would address the first two components of self-regulation to work towards improving your learning.
- Plan:
 - Monitor:

Appendix C: Self-Regulation Performance-Based Observation Items

Based on observations across time or in specific situations, the educator rates each student's self-regulatory 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-Regulation Sequence Indicators	Beginning	Emerging	Proficient	Advanced	Not Observed
1. Demonstrates the ability to create a plan to accomplish a task or set of tasks.					
2. Identifies potential barriers to plan completion using if-then statements.					
3. Monitors progress of efforts over time.					
4. Plans and practices ignoring some distractions during a task, resulting in increased focus.					
5. Reflects on strengths, challenges, effort, and outcomes related to self-regulation in specific situations.					

Appendix D: Self-Regulation 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-regulatory behaviors by rating their performance on a 3-point scale. This assessment can be used at purposeful intervals to monitor the development of each student.

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

Component	Limited Self-Regulation	Moderate Self-Regulation	Substantial/Thoughtful Self-Regulation
Planning	I didn't do much planning. I may have thought about it a little.	I thought about what I needed to do to accomplish this. I may have written down a little.	I planned this out with the detailed I needed to accomplish it. I thought about my past efforts to make a plan that would work well for me.
Monitoring	I didn't do much to track my progress. I may have thought about it a little.	Occasionally, I thought about my progress to accomplishing the task and the effort I put into it. Other people may have reminded me to monitor my progress.	I monitored along the way, making sure I was on track to accomplish it and thinking through the effort I put into it.
Adjusting	I didn't really adjust my plan even when I should have.	I thought through some of the things that were getting in my way when I got off track.	I adjusted as needed to stay on track or modified my plan to accomplish this. I thought about what was getting in my way when I got off track and made changes.
Reflecting	I didn't reflect throughout the process. I may have reflected a little at the end.	Occasionally, I reflected on my effort and my progress. I may have reflected on my learning.	I reflected throughout the process on my effort, my progress, and my learning.