

Self-Efficacy Formative Questionnaire

Technical Report

Overview

What This Questionnaire Measures

In the context of education, self-efficacy refers to perceptions an individual has about his/her capabilities to perform at an expected level and achieve goals or milestones. It is shown to influence academic motivation, learning, and achievement (Pajares, 1996; Schunk & Pajares, 2001). In short, self-efficacy can be defined as believing in your ability to accomplish challenging tasks and that your ability can grow with effort (Gaumer Erickson & Noonan, 2016).

The Self-Efficacy Formative Questionnaire is designed to measure a student's perceived level of proficiency in the two essential components of self-efficacy, which are:

1. Believe that ability can grow with effort.
2. Believe in your ability to meet specific goals and/or expectations.

How This Questionnaire Is Accessed

Teachers can launch questionnaires and view both individual and aggregate student results by visiting <http://ResearchCollaborationSurveys.org>, creating an account, and following the instructions provided on the website. This website is free and available to all educators. Once students have completed the questionnaires, teachers can see graphed results for individual students as well as in aggregate. Teachers can also download a raw data file in MS Excel.

The questionnaire can be cited as:

Gaumer Erickson, A.S. & Noonan, P.M. (2018). Self-efficacy formative questionnaire. In *The skills that matter: Teaching interpersonal and intrapersonal competencies in any classroom* (pp. 175-176). Thousand Oaks, CA: Corwin.

This technical report can be cited as:

Gaumer Erickson, A.S., Soukup, J.H., Noonan, P.M., & McGurn, L. (2018). *Self-efficacy formative questionnaire technical report*. Retrieved from <http://www.researchcollaboration.org/uploads/Self-EfficacyQuestionnaireInfo.pdf>

How This Questionnaire Is Completed

Teachers make the questionnaire available to students by providing the URL to the survey (<http://is.gd/rcsurveys>) and a survey code (specific code for each launched survey); both the URL and survey code are provided on the website when a survey is launched. Students enter the survey code and a student number assigned by the teacher. Students complete the questionnaire by self-rating items on a 5-point, Likert-type scale. This scale ranges from 1 (*Not very like me*) to 5 (*Very like me*). The results are automatically graphed for students and available to them once they complete the questionnaire. This enables them to immediately reflect on results.

The items on the questionnaire are written at an eighth-grade reading level, per the Flesch-Kincaid¹ readability score. 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.

How to Use the Results

Self-Efficacy Formative Questionnaire results can be used by both teachers and students. To ease interpretation, results are displayed on a 100-point scale. These scores can be interpreted similar to grades (e.g., 70-79 is a C). Results by essential component support reflection on relative strengths and areas for improvement.

Students can use the questionnaire results to build an awareness of how their perceptions and beliefs about their ability contribute to their academic success. As students better understand that they can positively impact outcomes with effort, they build confidence in their ability to take on more challenging tasks.

By determining which perceptions impact their students' motivation to succeed, teachers can enhance their instructional practices through targeted instruction. For example, if the student results indicate that students view ability as fixed, teachers can counter that belief by teaching students about brain plasticity and incorporating instructional practices that help students see their progress over time. After combining this targeted instruction with ongoing guided and independent practice with feedback, teachers can re-administer the Self-Efficacy Formative Questionnaire and alter their instruction accordingly. This allows teachers to engage in data-driven decision making to increase students' abilities to understand the positive impact effort has on ability, as well as foster belief in students' own abilities to make progress on challenging tasks.

Additional resources for teaching self-efficacy are available at <http://Resources.CCCFramework.org>.

Technical Information

The Self-Efficacy Formative Questionnaire was developed in 2015 by Research Collaboration (<http://ResearchCollaboration.org>). An extensive review of related research resulted in identifying the two components essential for developing self-efficacy. Positive self-efficacy increases when students both believe that ability can grow with effort, as well as believe in their abilities to meet specific goals.

The questionnaire was tested for reliability using Cronbach's coefficient alpha² with 4,989 middle school and high school students during the 2016-2017 and 2017-2018 school years. Demographic data of grade and gender were added to the questionnaire in fall 2017. Of the 4,333 students that completed the survey since fall 2017, 2,093 (48%) were female, 2,008 (46%) were male, and 232 (5%) did not report gender. The dataset

¹ 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.

² Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.; Cronbach, L.J. (1988). Internal consistency of tests: Analyses old and new. *Psychometrika*, 53, 63-70.

includes 358 students in sixth-grade, 356 in seventh-grade, 421 in eighth-grade, 703 in ninth-grade, 443 in tenth-grade, 565 in eleventh-grade, 711 in twelfth-grade, and 328 post-high school.

Overall, the Self-Efficacy Formative Questionnaire was found to be highly reliable (13 items; $\alpha = .894$). The belief that *ability grows with effort* subscale consisted of 5 items ($\alpha = .805$) and the belief in *personal ability* subscale consisted of 8 items ($\alpha = .841$). When converted to a 100-point scale, the bottom quartile ranged from 20 to 77 and the top quartile ranged from 92 to 100. The questions making up each subscale of the formative questionnaire are listed below.

Belief in Personal Ability

1. I can learn what is being taught in class this year.
2. I can figure out anything if I try hard enough.
3. If I practiced every day, I could develop just about any skill.
4. Once I've decided to accomplish something that's important to me, I keep trying to accomplish it, even if it is harder than I thought.
5. I am confident that I will achieve the goals that I set for myself.
6. When I'm struggling to accomplish something difficult, I focus on my progress instead of feeling discouraged.
7. I will succeed in whatever career path I choose.
8. I will succeed in whatever college major I choose.

Belief that Ability Grows with Effort

9. I believe hard work pays off.
10. My ability grows with effort.
11. I believe that the brain can be developed like a muscle.
12. I think that no matter who you are, you can significantly change your level of talent.
13. I can change my basic level of ability considerably.

Questionnaire

Self-Efficacy Formative Questionnaire

Please **CHECK ONE** response that best describes you. Be honest, since the information will be used to help you in school and also help you become more prepared for college and careers. There are no right or wrong answers!

Student ID _____

Date _____

	Not very like me Very like me				
	1	2	3	4	5
1. I can learn what is being taught in class this year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I can figure out anything if I try hard enough.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. If I practiced every day, I could develop just about any skill.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Once I've decided to accomplish something that's important to me, I keep trying to accomplish it, even if it is harder than I thought.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am confident that I will achieve the goals that I set for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. When I'm struggling to accomplish something difficult, I focus on my progress instead of feeling discouraged.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I will succeed in whatever career path I choose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I will succeed in whatever college major I choose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I believe hard work pays off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. My ability grows with effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I believe that the brain can be developed like a muscle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I think that no matter who you are, you can significantly change your level of talent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I can change my basic level of ability considerably.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>