

## TEACHING STRATEGIES

# Making Failure Harder Work Than Passing

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(<https://www.flickr.com/photos/usace/>)

Chemistry seems to inspire a "D" mentality. A significant number of students just want to pass the class, meet their graduation requirement, and do it with as little effort as possible.

Take Evelyn, for example, a junior in my chemistry class last term. Evelyn is a bright young lady, but she didn't see chemistry as relevant to her present or future, so she kept her head low, didn't engage in the material, missed about 20 percent of the class, and seemed to target a grade of 60 percent. That was at the beginning of the class.

By the end of the term, Evelyn was sitting in the front row, volunteering to demonstrate how to solve problems, and getting frustrated with herself when her final grade in the class was a "B."

Evelyn's grade had gone from a 60 percent to an 85 percent, but the real changes that I saw in her were much more rewarding than an improved grade point average. Evelyn was engaged in learning, taking risks, and working harder than she had once believed she could.

Many students will avoid working hard in a class that they see as challenging because of the risk involved. If they work hard and fail, then they've proven their inadequacy. But if they don't work hard and manage to get a "D," then their pride remains intact and they haven't lost anything. That's the reason why, in my class, I make failing harder work than passing.

## Turning "I Can't" Into "I Can"

Here is the typical learning cycle for a unit in my chemistry class.

1. I present the students with a list of learning objectives for the unit. The list is short, concise, and worded as "I can" statements. Here is an example of the objectives for the unit on dimensional analysis and the mole (Holt Chapters 7 and 3):
  - I can identify the mole as the unit used to count particles, and use Avogadro's # to convert between moles and particles. (7.1)
  - I can calculate the molar mass of an element or compound. (3.4)
  - I can perform molar conversions (use the Mole Road Map). (3.4)

2. There are guided practice opportunities for students on each of these objectives, and then there are formative assessments. The formative assessments could be homework, quizzes, or labs. They count for very little in the grade. The point of these assessments is to give kids a lot of practice with the material in a low-risk environment, and to provide feedback on their progress toward mastering the objectives.
3. After a period of guided practice, formative assessment, feedback, and review for each objective, the students prepare for the summative assessment. The summative assessment is weighted heavily in determining the grade, so we practice the types of questions that they'll encounter on the assessment.
4. Students take the summative assessment. A passing grade is 70 percent. Students who don't meet that minimum requirement have to retake the assessment. They're given a test map showing them which objectives they didn't master. The test map is accompanied by an intervention worksheet organized by objective. Students are expected to complete the worksheet sections that they need to practice in order to improve their score.

Image credit: Angela Campbell (Click image to download the Word doc.)

(<http://www.edutopia.org/pdfs/blogs/edutopia-campbell-makingfailureharderwork-MoleTestMap.docx>)

## Differentiation and Incentive

The final stage of the learning cycle is where instruction is truly differentiated. Students who are required to retake their test must show me their intervention worksheet (completed) so that I can see if they're getting closer to the targets. Usually, they raise their grade to a passing score after one retake. Sometimes it takes a couple of rounds to get this accomplished -- but they have a time limit. They have to finish the retake cycle before the next unit test.

Students who score below 90 percent but have still passed the assessment may also go through this cycle. Many students in the 70-89 percent band opt to do the intervention and retake the test.

Students who are content to score at or below 60 percent are faced with extra work that they would not have to do if they were scoring just ten points higher. This cycle helps students begin to understand that, if they can do the work required to get 70 percent, it's not much more work to get an even higher grade. And the progress is addictive.

This is not a canned curriculum. I write my own tests, quizzes, test maps, intervention worksheets, homework assignments, and labs. I use sample questions from the state tests as a guide for the types of questions to include on my exams. I do all of the grading and fill out the test maps by hand. It's time consuming, and I have to take work home with me every single day. I do my grading while my own children do their homework. While this learning cycle works, it requires a lot of effort. I think the final result is worth all of that effort.

How do you inspire your students to work harder and recognize their potential?

**Source:** [www.edutopia.org/blog/making-failure-harder-work-angela-campbell](http://www.edutopia.org/blog/making-failure-harder-work-angela-campbell)

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