

TEACHER to TEACHER

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Teaching with mirrors

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It's all because of the eyes. It's the way evolution designed them, always pointing us away from ourselves. Eyes only render an external, fragmented perception of who we are, unwilling to lend their lenses to the self. And they are not alone: ears, skin, nose, tongue, also contrive to cast our attention elsewhere in a perverse act of misdirection. I guess that, for evolution, the tiger without was far more threatening than the tiger within.

For educators, the lack of ample and accessible avenues to the self forces us to seek means to compensate nature's perception imbalance. Education requires insight, vision turned around, and for this, it has to build mirrors and question their reflections.

It's not as if our traditional disciplines are poor reflecting surfaces for self-knowledge. Each discussion of history, economics, or art is potentially a mirror to the self. Yet, for the masses of underprepared students in our classrooms, the process of seeing the inside through the outside is largely counterintuitive. Lacking in the art of intellectual reflection, students struggle to survive the academic environment. Content is not well understood, critical skills are not gained, and personal growth is arduous. If these students are to grow beyond mere survival, they must be provided with a set of academic senses --eyes-- appropriate to college. They must be shown educational mirrors that will promote introspection and acquaint them with their intellectual selves.

An educational mirror, be it a student generated quiz, a rubric to assess studying patterns, or a grade chart to track one's own progress, is an instrument for academic reflection. When used in a systematic fashion, educational mirrors cast an integrated image of the students' academic self. Under the guidance of the instructor, the mirror facilitates a dialogue between

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the student's imagined sense of academic ability and the student's actual performance. In the back-and-forth with the mirror, the student negotiates any discrepancy between the imagined academic self and the reflected one. Changes are made --more study hours here, less television fat there-- to reduce the cognitive dissonance by redrawing the features of the reflected and imagined academic selves. The result is a larger awareness of oneself as a learner, and with it, the ability to take charge, make changes, and grow.

There are many ways to invite and guide academic self-reflection with mirrors. I have listed below a few I have used in my classes. You are welcome to take a look in case you find something you would like to try.

Mirror 1: Self-Generated Quizzes

As the name implies, self-generated quizzes are created by students, who are thus challenged to reflect on the material and think critically about it. Here's how it works: students are asked to create their own questions in class, so the instructor can circulate among them, clarifying concepts and helping with question design. (This is a great opportunity to gain some sense of what the students are learning from the type and quality of the questions generated.) The questions are written on separate sheets of paper with the students' name at the top. As students finish their questions, the sheets are exchanged repeatedly throughout the class. Students go through the question sheets in pairs, so that peer learning and modeling are brought into the activity. (The motivation level rises as students realize they may be looking at actual quiz questions.) After some reasonable time, the sheets are collected and the instructors selects the best questions for the quiz. (I do it on the spot on a screen.)

As you may expect, you will have to edit some questions for clarity and quality. You may also have to add questions of your own when the pool is short in quality or range, but classes normally generate an acceptable pool of questions for something small like a quiz.



A good way to think of a self-generated quiz is as a graded in-class exercise, a formative assessment to further learning and help students take a leading role in their education. In their role as mirrors, self-generated quizzes reflect the content of the assessment and its results back to the student. The writing of the questions, good and bad, point back toward the student's own performance, and poor results can hardly be

attributed to a hard instructor or a hard test. This is not a minor point for developmental students, who often place the locus of control for their academic performance on external causes, avoiding responsibility, but also feeling helpless to improve their standing.

Mirror 2: Self-Graded Assessments

Who hasn't spent hours grading tests or essays only to watch students shove them in their backpacks without looking at the comments? With self-graded assessments, the burden of assessing performance rests on the students. Because their grade is on their hands, students have to pay close attention to the number and type of errors as they evaluate their responses. There's no way to look away as they can when the instructor does the grading for them. When they grade themselves, they must stare at the mirror and in so doing gain a sense of their academic strengths and weaknesses.

To use this technique, only underline the errors you find when you review the tests (you can also use a key if you want.) The test is then returned to the

students, who are provided with a rubric and shown how to use it. (Keep the rubric simple and give clear examples. You may also do some norming with a sample test.) With the help of a projector screen, show one question at a time, discuss it, and ask students to assess their responses with the rubric. After the students are done computing their grades, collect the tests.

Now all you have to do is check the students' self-grading, making any needed corrections, and record the results. If you want to skip this part, you can choose to grade the tests as you look at them the first time, but don't write the scores on the test. Instead, use a separate grading sheet with question numbers and points. After the students grade themselves, you can distribute the grading sheets so they can compare the two.

As a mirror, self-graded assessments invite students to reflect on the quality of their responses. With a rubric and guidance, the self-grading process becomes an exercise in academic self-reflection that provides students with a detailed image of their performance.

Mirror 3: Post-Test Self-Reflection

What do your students usually do after they get their test results? Do they use the results to reflect on their performance and plan changes for the next test? If you suspect that your students are not getting the most from the feedback you provide in the assessments you return to them, you can lead them on an academic self-reflection exercise with a rubric.

Many students, particularly those fresh from high school, do not have a good sense of the amount and type of studying needed to succeed in college. Often, these students imagine that they have studied

enough for a test, only to find out that the actual score is far from the one they envisioned. For a number of reasons, their sense of self-efficacy does not match their actual performance and they often conclude that the course is too hard or that they lack the smarts for college.



To help these students gain insight on their test performance, you can guide them with a post-test self reflection rubric. The first step is to have students write down the grade they expect to get before you hand back the graded exams. (Tell them to think about how well-prepared they thought they were for the exam and think of a grade.) The point of having to write their expected grade is to produce a measurement of their sense

of self-efficacy. Then, hand back the tests, and ask students to compare their expected grade with their actual one. (What you are doing here is contrasting their imagined sense of academic performance with their actual performance.) If there is a gap, ask them to think about what they are going to do in order to close the gap in the next evaluation, so that they actually get the grades they expect.

At this point, put up on the screen a self-reflection rubric with a range of variables, from number of hours studied to motivation, study techniques, and goals. (You can download a sample self-reflection rubric at: www.canyons.edu/Offices/ITL/teacher.asp) Go through the variables, having the students rank themselves in each. How many hours did you study? (There's a scale from 0 to 8 hours/week.) How is your help-seeking behavior? (Options include not asking for help, asking a peer, a tutor, or the instructor.) By having students reflect on each variable, they gain insights to construct a better image of their academic self than the one they may create on their own.

Teaching with mirrors continued

When students learn the multiple variables that affect their academic performance, it is harder to hold on to a simplistic causality that, regardless of its locus, denies agency to the student. Knowing the factors of academic performance is knowing where to intervene to improve it.

Mirror 4: Progress Chart

Have you had students who do not know how they are doing in your class even in the last week of classes? How about students who consistently get D's and are surprised when they don't get a B for the course? To avoid these problems, but more importantly, to have students reflect systematically on their performance, you can ask them to plot their grades on a chart as the course progresses. In addition to being a great visual representation of performance, a chart will mirror the effectiveness of the students' efforts at improving themselves. (Encourage them to make changes in their studying behavior, and measure the impact of the changes with the chart.)

Show students how to plot grades in the chart, either by using exam grades or by using overall class grades. (Using only exam grades is simpler, but computing overall class grades provides a better image of the students' class standing). The charting works better, and the feedback is better, if you assess frequently, say, with weekly quizzes or some other graded work. Without these frequent images of their performance, students will not have enough or timely information to change their academic behavior.

If you want to make things more interesting, ask the students to graph both their expected grades and their actual grades. (Plot the grades they think they are going to get on a test, and then plot the actual grade when they get the test back.) The gap between the two will show whether their notion of what it takes to succeed in college is actually sup-

ported by the evidence. If all goes well, the gap will close as the course progresses, showing that students are adjusting their studying behavior. (When students improve their studying approach they are more able to accurately forecast their actual performance, so the gap between expected and actual grades closes.) (Download sample progress chart here: www.canyons.edu/Offices/ITL/teacher.asp)

There you go. As a final note, I must confess that these mirrors are blatant copies or modified versions of ideas shamelessly stolen from others, like Zimmerman and Dembo among the gods of self-regulated learning, and our local COC talent, including Chelley Maple, Heather MacLean, Daylene Meuschke, and the merry, merry band of counselors. Feel free to continue the tradition by stealing any of these mirrors from me. Just don't break them.

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