Thriving in Academe

REFLECTIONS ON HELPING STUDENTS LEARN

Thriving in Academe is a joint project of NEA and the Professional and Organizational Development Network in Higher Education (www.podnetwork.org). For more information, contact the editor, Douglas Robertson (drobert@fiu.edu) at Florida International University or Mary Ellen Flannery (mflannery@nea.org) at NEA.

Feedback without Overload

To learn well, students need to use their learning and receive high quality feedback. But who has time to give a lot of great feedback?!? Explore how to super-charge the student's learning environment with productive feedback without burning out.

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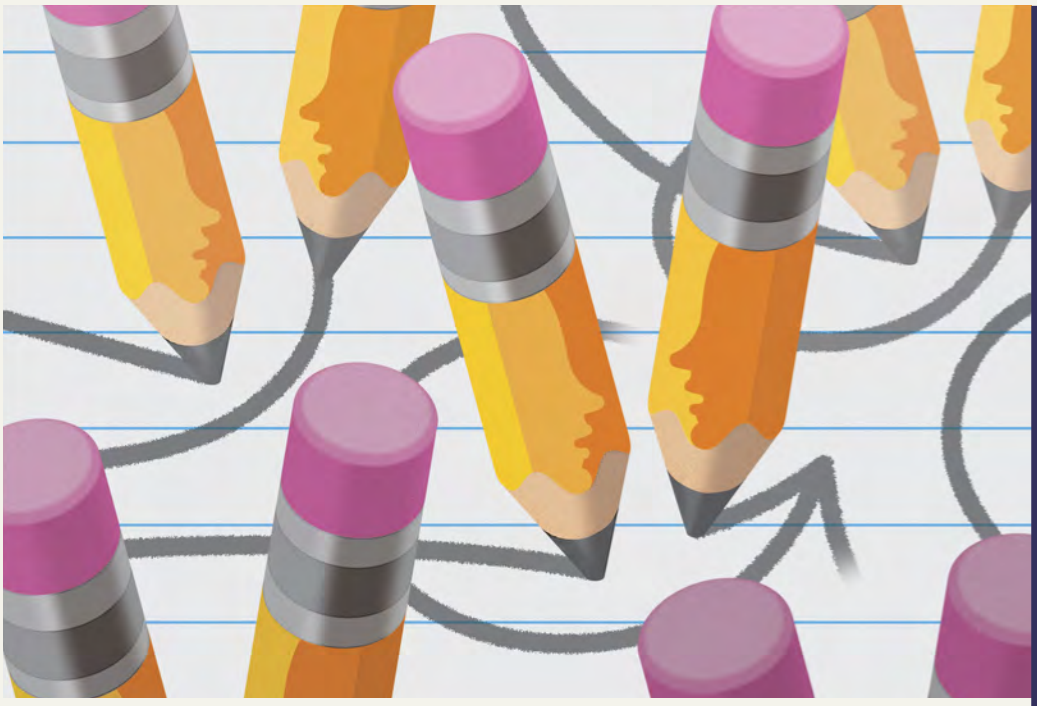
Good teaching is creating good learning systems

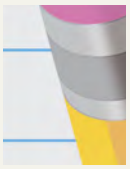
A while ago, I examined hundreds of studies and stories about how college teachers think about their work as teachers, and I discovered a pattern. We college teachers tend to focus on what to teach, and on ourselves as the master learner. We want to know our stuff, and we want to share that knowledge, usually by telling students about it or demonstrating it.

After some time, if we continue to develop as teachers, we realize teaching is not just about disseminating content; it is most fundamentally about facilitating learning, something very different. If learning is to occur, the learners, the students, need to do it. This understanding leads to our focus on the learners and how they learn.

If we continue to develop as teachers, we realize that what we need to focus on is not just separate elements (first, the teacher; then, the students), we need to concentrate on creating learning systems of which we and the students are parts. Learning systems function to support learning whether we are there or not. Indeed, we are an important part. For one thing, we are the initial designer or creator of what becomes a dynamic learning system. But we are just a part. This perspective –focusing on learning systems—has the optimal potential to facilitate high quality learning for the most students, and I discovered that it characterizes the best teachers.



Meet Douglas Robertson



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Good learning systems are rich with feedback

Let us turn to the role of feedback in learning systems. In order to learn, students need to use their new knowledge and reflect on what happens when they use it.

Different theoretical perspectives have different words for this phenomenon—contingencies, consequences, feedback—but it is all the same thing. The learner uses their knowledge, and they see what happens.

The teacher in a good learning system—a good course—develops mechanisms that have students use their new knowledge frequently and get feedback on the quality of their learning, reflect on that feedback, and get a chance to use their new understanding, all right after their initial use of the knowledge.

EXEMPLARY NIFS INVOLVE FEEDBACK FROM **ANY SOURCE OTHER THAN THE TEACHER** THAT STUDENTS CAN USE TO UNDERSTAND THE QUALITY OF THEIR LEARNING AND HOW TO IMPROVE IT.

The press is on to teach more in less time.

Throw into the mix a recessionary economic environment that presses for us to teach ever larger enrollment courses and more of them. A rule of thumb is that in

TALES FROM REAL LIFE > YOU DON'T HAVE TO DO IT ALL.

Early in my career, I was committed to requiring students to write short reflection papers about each assigned reading. As my class sizes grew, I remained committed to providing written feedback myself. My load became so overwhelming that I could not complete that task each week. As the weeks passed and the piles of unprocessed reflection papers grew, my guilt mounted exponentially. It was not a good situation. Finally, I tried something new. I began the semester by explaining the value of writing reflection papers. But I would confess that time did not allow for me to comment on the papers. I explained that I would read all of the papers carefully and look for patterns of responses. At the class meeting, when the papers were due, the students would pair with someone whom they did not know, and each person would explain and discuss their reflection paper (5 minutes for the pairing). The student received direct feedback from their partner. In the large group, they received my feedback. Not only did they receive feedback from multiple sources, but an accountability dimension was added because they had to face other students and represent their work. Also, they met and interacted meaningfully with another student each week and expanded their peer learning network. This was not just a compromise, it was better. I did not need to do it all. I was sold.

order to optimize learning, students should spend as much time using their knowledge (and working with feedback) as they do acquiring it in the first place.

But how can we possibly provide that critical feedback when there are so many students and so many courses?

The answer is NIFs: Non-teacher Instructional Feedback

NIFs are information from any source other than the teacher that students can use to understand the quality of their learning and ideally how to improve its quality.

When you think of all of the possible elements in a learning system, how many of them could be a good source of learning feedback for students, or a NIF?

Students as NIFs

Students can provide useful feedback to other students in both face-to-face and electronic environments. One of Chickering's and Gamson's famous seven principles of good practice in undergraduate education involves promoting productive student-to-student interaction. Anothe focuses on encouraging active learning, and still another involves providing timely feedback. All three come together in what has become a generous collection of active learning techniques that do not necessarily require the teacher to be providing the feedback, but instead generate useful student-to-student feedback. Providing students with a little initial training in giving useful instructional feedback is a good practice. A simple Google search of "active learning" will yield a large number of examples of NIFs that use student-to-student feedback effectively.

One classic example is the Think-Pair-Share technique. The teacher poses a generative question and gives the students a specified amount of time to write their answers. Then students pair up and discuss their answers. I always require students to pair up every time with an unfamiliar person, so that they can expand their networks. At the halfway point, I announce that the partners who did not start should now explain their response. After a specified time, typically about 10 minutes, the class re-convenes and shares insights or observations that came out of the interaction.

A LARGE BODY OF ACTIVE LEARNING TECHNIQUES NOW EXISTS THAT **DO NOT NECESSARILY REQUIRE THE TEACHER TO PROVIDE THE FEEDBACK** BUT INSTEAD GENERATE PRODUCTIVE NIFS.

An even shorter version is the Pause Technique, which involves simply stopping in a presentation every 15 minutes or so and having students share their notes with each other, and then moving on. The research on the efficacy of this quick student-to-student interaction is impressive.

A large cadre of small group techniques, such as Cooperative Learning and Team-Based Learning, also are excellent ways to generate productive student-to-student NIFs.

With the warp speed development of social media options, a whole new frontier of electronic tools and environments provide exciting new options for generating student-to-student feedback. Twitter, Facebook, learning management systems, wikis, and blogs are now conventional, and by the time this article is published, a new tool may already be ascendant. Students live in these environments, and teachers need to be able to go there.

Computer-based instructional programs as NIFs

Speaking of electronic environments, another NIF source comprises various computer-based instructional tools. MERLOT has either thought about, or been asked about, virtually every possible issue. For example, the expected question, how do you evaluate individual performance in a team context? His responses are often data-based, and TBL is an excellent example of the scholarship of teaching and learning.

BEST PRACTICES > ACTIVE LEARNING IN LARGE GROUPS

In the 1970s, Larry Michelson was a management professor at the University of Oklahoma when, because of budget cuts, his class sizes suddenly went from the 40s to the 140s. His colleagues told him his active learning techniques would have to go. But he knew they worked. So over the next 30-plus years, Michelson created and refined a highly effective and well-documented pedagogical system called Team Based Learning (TBL), which allows a single instructor to use active learning in large enrollment courses. TBL is backward designed and includes the careful clarification of learning objectives, learning activities supporting those learning objectives, and assessment procedures of progress toward the learning outcomes. TBL involves forming teams that function together for the entire semester, not transient small groups. Accountability (feedback) is embedded for both individuals and teams. Each major unit includes individual study, readiness assurance (individual test, team test, written appeals, and instructor feedback), and application activities. Heavy emphasis is on the application activities, or use of material. Over the decades, Larry Michelson

(Multimedia Educational Resource for Learning and Online Teaching at **www.merlot.org**) is a free, easy to navigate site that contains thousands of learning objects, many of which are interactive. The learning objects are blind reviewed and rated by experts and, in a separate display, also by users. MERLOT learning objects have been integrated with some learning management systems such as Blackboard and can be easily inserted into the course shell. In addition, the Khan Academy is a remarkable resource for mastery learning web-based systems (**www.khanacademy.org**), which realizes the Personalized System of Instruction (PSI) envisioned in the 1960s by Fred Keller. Web-based tutorials that relate to all or part of a course are also often available through textbook publishers.

Outside experts as NIFs

I used to require students to identify successful people in their area of interest and to ask these experts a series of questions—to conduct an informational interview. I realized I was missing a good opportunity for the students to receive feedback. So I added to the assignment the requirement that students develop a short written statement on their current plan to advance in their interest area and send it to the expert in advance of their meeting for discussion at the meeting. The procedure provided excellent feedback to the student on their understanding of the professional area and how to prepare and advance in it.

Scholar databases as NIFs

Finally, scholarly research data also can provide generative feedback regarding students' knowledge. For example, students can be asked to write a brief statement of their understanding of a topic and then assigned to go to searchable scholarly databases to see what the research shows. Does the research support their understanding or not? If so, to what extent?
Are there missing nuances in the students' understanding? Important learning results from this feedback.

ISSUES TO CONSIDER

CHALLENGING YOUR ASSUMPTIONS AND MAKING CHANGE

If I don't provide the feedback, students may not learn anything or may learn the wrong thing.

I have four comments about this common concern. First, it is legitimate. Care must be taken to have the feedback, whatever the source, be of the highest possible quality. The teacher needs to provide instructions to the feedback sources where possible. For example, if the feedback is from peers, then provide some initial structure and direction to students by perhaps discussing the purpose of the feedback and how it can best realize that purpose. Rubrics may help.

Second, if teachers are the primary source of feedback for students, teachers who feel overwhelmed often reduce the frequency, richness, and immediacy of the feedback because they feel they simply have no choice. When teachers choose to maintain the quality of the feedback by doing it all themselves, ironically the outcome for students is often lousy feedback.

Third, when teachers know they are providing lousy feedback they can feel guilty and become defensive. In response, the students can get chippy. Off we go on negative communication spirals. As the teacher-student dynamics become increasingly dysfunctional, the quality of the learning environment declines dramatically.

Finally, when you examine the research about active learning and using feedback sources other than the teacher, you find abundant support for these practices. It appears that when done properly, students really do learn more with multiple sources of feedback. Even a practice as simple as the pause technique (stopping the teacher's presentation every 15 minutes or so for students to pair up and compare notes) has documented statistically significant gains in learning over the conventional continuous lecture.

How do I get started? I'm used to lecturing. I don't have a lot of time and don't know where to begin.

Resistance to change is natural. So the fact you are ready to try something new means that you are already through the first phase—realizing you have to change. Congratulations!

The best way to proceed is to try a mini-experiment and assess the results. Try something that is fail-safe. In other words, if it does not work, the failure does not have huge consequences. Forget about fail-proof.

If you have a center for teaching and learning center on your campus, consult with these faculty development professionals to get ideas and some assistance with assessing the outcomes. At many campuses, faculty development centers exist, but somehow faculty still do not know about these wonderful resources.

ADDITIONAL RESOURCES

Fink, D. (2003). *Significant learning experiences: An integrated approach to designing college courses.* San Francisco: Jossey-Bass.

Keller, F. (1968). Goodbye teacher… *Journal of Applied Behavior Analysis,* 1, 79-89.

Khan Academy website, http://www.khanacademy.org.

Michaelsen, L.; Bauman-Knight, A.; & Fink, D. (2003). *Team-based learning: A transformative use of small groups in college teaching.* Sterling, VA: Stylus Publishing.

Multimedia Educational Resource for Learning and Online Teaching, MERLOT website, http://merlot.org.

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Robertson, D. (2001). Beyond learner-centeredness: Close encounters of the systemocentric kind. *Journal of Faculty Development, 18*(1), 7-13.

Robertson, D. (2000). Professors in space and time: Four utilities of a new metaphor and developmental model for professors-as-teachers. *Journal on Excellence in College Teaching, 11*(1), 117-132.

Robertson, D. (1999). Professors' perspectives on their teaching: A new construct and developmental model. ***Innovative Higher Education, 23***(4), 271-294.

Team-based learning website, **http://teambasedlearning.org**