



Enter: The (Well-Designed) Lecture

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In his 1999 article [*The Teaching Professor*, 13 (1)], “Wither: The Lecture,” R. G. Driver laments the downfall of the traditional, unadorned lecture. Six years later, the traditional lecture continues to be heavily criticized in the wake of reform movements that are shifting instruction to the learning paradigm. Professor Driver points out that lectures can be interesting and inspiring. However, many more educators blame the traditional lecture for not actively involving students, not holding their attention, not promoting the retention of material, and not supporting multiple learning styles. Based on our own experiences and observations, these negative descriptions of the lecture format are a bit exaggerated. Yes, there is room for improvement, and those who currently defend the lecture format usually speak of the well-designed lecture — not the stereotypical presentations which clog up thoughts of talking heads and sages.

From our perspective, the well-designed lecture is an instructor-led, interactive experience that actively engages students in the process of learning and can support diverse student learning styles. This approach provides foundational knowledge and appropriate study strategies needed to master material outside of class (develop patterns and levels of meaning), participate in inquiry-based group projects (construct knowledge), and learn how to be responsible for their own learning (teach themselves how to learn). Although ardent supporters of the learning-centered paradigm may not agree, a well-designed lecture is focused on student

learning and does not just involve marching through material and giving tests to generate grades. Indeed, there is and has to be a place for this type of lecture in the learning-centered paradigm, especially if it is to be widely accepted among university communities. Various forms of lecture remain the dominant mode of instruction on college campuses. They have successfully impacted the lives and learning potential of many students and should not be discarded as an outdated method that has no place in modern universities. Instead, more attention needs to be focused on improving the lecture format and designing it such that the process and product of a lecture, when combined with other inquiry-based methods, engages a larger number of students and meets the objectives of learner-centered instruction.

Redesigning the lecture can be a daunting task, especially since the layout and infrastructure of our lecture halls change on the time scale of decades instead of years. Fortunately, many faculty members are trying to make the lecture format more conducive to learning by implementing methods that reflect current understandings of how people learn.

We have turned to technology to improve our lecture approach in chemistry and engineering courses, where auditory and visual modes of learning are extremely important. Over the last year, we have used the new technology associated with the tablet PC to change the way we present material in class. We use the tablet PC as a digital whiteboard where electronic ink is used to construct a rich set of notes that can be archived in a full range of colors, highlighted, and further supported with imported media. [Specific notes generated with a tablet PC can be found at a “Teaching Chemistry with a Tablet PC”

web page: http://campus.murraystate.edu/academic/faculty/ricky.cox/tablet/rc_tablet.html.]

Other technology-based teaching tools can also be a component of a well-designed, learner-centered lecture. Notable examples can be found with post-lecture quizzes in programs such as Blackboard or WebCT and real-time feedback obtained during lecture with a personal response system. These approaches allow an instructor to diagnose learning and make necessary adjustments during lecture or in a future class period. We have not embraced technology in an effort to entertain students that are more comfortable in a technologically advanced environment. Rather, we are convinced that innovative pedagogical technologies can improve teaching skills, provide a lecture experience that induces effective processing, and produce a lecture product that promotes student learning outside the classroom.

At a time when faculty members are being asked to be designers of learning experiences, we believe the lecture format is fertile ground in which to embrace the

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- Write with the understanding that your audience includes faculty in a wide variety of disciplines and in a number of different institutional settings; i.e., what you describe must be relevant to a significant proportion of our audience.
- Write directly to the audience, remembering that this is a newsLETTER.
- Keep the article short; generally between 2 and 3 double-spaced pages.
- If you'd like some initial feedback on a topic you're considering, you're welcome to share it electronically with the editor.

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Doing it the Night Before: Preventing Procrastination

Procrastination isn't just a student problem: 20 percent of all adults rate themselves as chronic procrastinators. But among undergraduates, the problem is acute: various studies document that 50 percent to 95 percent of all students are affected by procrastination. The problem is serious because when students procrastinate on their coursework, learning suffers. When a student spends an hour on an assignment that should take three, learning is proportionally diminished. For this reason, teachers have an obligation to do more than bemoan the problem.

Most often procrastination has been studied in terms of the personality characteristics or psychological states associated with it. A wide array of studies link procrastination to a lack of motivation, deficiencies in self-regulation, external locus of control, perfectionism, trait and state anxiety, fear of failure, low self-efficacy, and low self-confidence. Generally, instructors have little control over these individual characteristics. But short of therapeutic intervention, is there anything teachers do control that influences how much students procrastinate in their courses?

Yes! Although it has been studied much less, some work has been done on identifying the characteristics of tasks or activities that impact the extent of procrastination. The excellent study cited below looks at "how instructors can structure their courses and assignments to minimize procrastination." (p. 6)

These faculty researchers used an interesting study design to do so. Early in the semester, they asked students (almost 200 juniors and seniors) to think about an important assignment they had completed the previous semester. With that recalled assignment in mind, students completed a survey, first describing the assignment and then listing the amount of time they were given to complete it. The average amount of time was 6.5 weeks. Then students were asked how many days before the due date they started the assignment. The median

response was three weeks. So, on average, these students used about half the available time to complete the assignment. When researchers separated students into groups of high and low procrastinators, they found that gender was not a factor.

Based on previous research, the investigators identified 10 constructs related to procrastination that they operationalized as assignment-related variables. The survey used to assess the impact of these variables is included in an appendix. It could be used to provide valuable instructor feedback as well as to heighten student awareness.

Among those 10 characteristics that made a difference in the extent of procrastination were the following:

Interest in the assignment — Low procrastinators reported more interest in the assignment than those in the high group. This confirms experiential and experimental findings. Interest is a great motivator. Investigators recommend using "real and realistic projects, assignments that develop practical professional skills, and projects chosen because of their personal relevance to students. . . ." (p. 8) Later they propose giving students choices among assignments.

Skill variety — Assignments that require students to use a variety of skills were perceived as more interesting and therefore more effective at motivating students to begin work earlier.

Clarity of instructions — Interestingly, the perceived difficulty of the assignment did not emerge as one of the aspects of assignment design that affected motivation, but clarity of instructions did. If students were not confused about what was expected or what they needed to do in order to succeed, they were less fearful and more motivated to get started.

Rewards and incentives — Students in this study got started earlier when there were rewards and incentives for doing so.

The Power of Putting the Students at the Center of Learning

By Henry A. Johnson, Jr., *Johnson & Wales University, RI*
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Ed.'s nte: *Some times and for some reasons, teachers need to take risks. This piece describes how much one instructor learned when he opted to take one course to the edge.*

As an instructor at a career-focused university, I thought I had experienced it all: great classes and bad classes, classes that ran smoothly and those that required firm management, classes that were a breeze and those that challenged my patience. Despite these experiences, I was unprepared for what became my best class, the one that most changed my outlook on teaching.

After a medical leave, I returned three weeks into the new term to an introductory career-preparation course for 37 equine students.

In passing the reins to me, the covering instructor said, "I don't envy you." Being raised in an urban area, I had hardly ever seen a horse, never mind knowing anything about the industry. In preparation, I tried to read everything I could find about the equine industry. But I knew that despite my best efforts, I would only be faking what I knew.

What was I going to do? After thoughtful contemplation I realized that if I truly wanted to make the class work, I should turn my students into teachers. Instead of trying to relate to them, I decided to make them relate to me.

I came to the first class and began to ramble off names like Vygotsky, Dewey, Piaget, and other educational theorists as quickly as I could, using as many polysyllabic words as possible.

As soon as I was sure I had every student confused, I stopped and asked them how they felt. They offered words such as lost, confused, angry, and overwhelmed. "Well," I said, "that works both ways. Over the next seven weeks, I want you to take what you know about the equine industry,

expand it, and then teach it to me. I want to know about your industry, but you will have to teach me using plain language and terms I can understand."

As a symbolic move, I took out a copy of the syllabus and ripped it up. "This class will not be bound by a defined agenda," I told them. "All the assignments you will design, all the exams you will write, and you will grade yourselves."

Student response was mixed. Some were happy; they thought I'd made the course easy. Some doubted my sincerity.

We then discussed the first project. I told the class their assignment was to instruct me about what they wanted to do in their field. They asked me: "How many pages does it have to be?" "Do we need to present it to the class?" "What specifically do you want to know?" I answered each question by simply saying these were their decisions to make.

That made the students angry and frustrated. They continued to grill me with questions, to which I replied, "You can do whatever you want, draw a picture, do a presentation, build a website, write a paper, I don't care. What I do care about is that you teach me what you have learned in your research."

Two students asked if they could do a joint project because they wanted to do the same thing. I said that would be fine. They then asked if I would visit them at the horse facility, which was about a half hour away. I told them I would. That Friday at 7:45 a.m. I found myself face to face with a horse for the first time in my life.

The students described how they were taking the horse for a riding lesson and why this was important. Their faces were glowing and their excitement contagious as they began to show me the horse's jumping skills.

The next class buzzed with kinetic energy. One student said, "You actually came to the barn. No instructors from the downtown campus have ever come to the barn."

The next Friday I made a second visit,

and for several hours the students showed and explained the different styles of riding. Other students gave me business plans for facilities they wished to own, others showed me videotapes of their competitions and explained the finer point of dressage.

Horse trainers lunge a horse in order to help the horse loosened up and to prepare for competition. I used this analogy for the students' comprehensive project.

Explaining to the class that in their professional careers the cover letter was the ticket into the competition and the resume was the competition itself, we began to examine the most difficult class material. We took each step slowly and methodically.

Students were concerned about the high level of detail involved in the assignment. I told them, "If you lunged a horse and it made a mistake, would you kill it?" They laughed and agreed that reasoning was illogical. "Then why would I kill you? Send me your drafts, I will grade them and give them back to you."

In my teaching career I always had given classes this option, but in the past at most one or two students took me up on the offer. In this class 31 of the 37 students (83 percent) submitted drafts for review. Never before had I given perfect scores on final projects; in this class I gave six.

At the last class, I was very emotional. I did not know what to say or do. Six of the students approached me at the beginning of class and asked me to become the faculty adviser for the equine club. I had protested initially, saying I was not qualified to hold such a position. "Professor Johnson" one student said, "We taught you all you need to know." 🍓

Adjuncts: Let's Have More of Them!

By Joe Reese

I've been reading a good deal in *The Chronicle of Higher Education* about the problem of part-time professors. Many people seem to feel that there are too many part timers. The full-time faculty are retiring and are being replaced by adjuncts that get paid poorly without benefits and who have neither office space nor time for students. And the problem grows as the number of courses taught by these part timers continues to rise.

College administrators, on the other hand, defend the use of adjunct faculty. I've taught at several different community colleges over the past few years, and I've had various administrators tell me I'm part of a very good thing. Most colleges host an annual luncheon for all of us part timers, and we're told publicly how much we're appreciated. We're an essential part of the institution, helping it to fulfill its mission. We're dedicated; we have fresh ideas; we bring new insights to students; and because of our selfless devotion to teaching and willingness to work for low wages, we help make higher education affordable.

I'm very moved when they talk to us this way, and I agree with them wholeheartedly. I think having so many adjunct faculty is such a great idea that we should

take it one step further: let's develop a system of part-time administrators. I mean, if it works for English teachers, why shouldn't it work for deans, deanettes, various academic VP's, comptrollers — even college presidents.

Let's imagine how it might work at Hillsburgdale Valley College (it must exist somewhere). Rather than one president, who makes more than \$100,000 annually, the college will now have three part-time presidents. Each will make \$10,000, or about five times what the part-time faculty make, which seems about the proper ratio, given that the presidents never actually teach anything. President #1 will breakfast with the Rotary Club and give a speech about the goals of higher education in today's technically oriented society. Then she'll meet with the booster committee to discuss the new stadium.

After that, she's done for the day — at least here. If she wants to be a part-time president at another institution where she can make another \$10,000, she's free to do that. But she can only work afternoons and evenings because Hillsburgdale Valley has her for the morning.

President #2 arrives at lunch and eats with the Planning and Development Committee. Since I'm just a teacher, I don't know what a Planning and

Development Committee is, but all colleges have one, and they always meet over lunch. Between 2 and 3 in the afternoon the president has "Open-Door Time," when, because he's genuinely concerned with students and how they're doing, he sits and listens to individual students, thereby keeping his finger on the pulse of the campus. Then he's gone. The evening president does dinner with some potential donors and then goes to hear the college symphony.

What have we spent here? Thirty thousand dollars plus food, but we save a lot of building space since none of the presidents has an actual office. But the main thing is that we get new ideas, fresh blood, genuine dedication — and, since there is now a lot more money in the budget, the trustees can give a banquet once a year for the part-time presidents and tell these people over baked chicken and green beans just how much they are appreciated.

I think it's a truly great idea. There will be doubters, of course. Some will insist that college presidents have major responsibilities involving crucial decisions that change a great many people's lives. I used to think that could be said of college professors, but we live and learn. ♥

PROCRASTINATION

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Rewards and incentives can include points, but less tangible rewards like smiley stickers or encouraging written comments on work in progress also work.

Interdependence — Breaking large assignments down into interdependent parts and requiring completion of those parts got students working on larger assignments earlier and kept them working more consistently.

Social norms — Class norms did influence procrastination among these students. If the teacher and other students

set the norm for promptness and timely completion, those likely to procrastinate were less likely to do so. If norms that validate procrastination were established, they influenced even those not prone to procrastinate.

As for what did not influence the decision to procrastinate, as already noted, the difficulty of the assignment did not emerge as a variable. Neither did perceptions of how time-consuming a project might be or the presence of deadlines. These findings led researchers to note that faculty can assign difficult and detailed assignments without fearing that they will encourage procrastination. In a break with

previous research, this study found that fear of failure did not influence the decision to procrastinate.

It's easy to lay the procrastination problem on students and certainly they must own a big part of it. But this research indicates that professors are not powerless. There are ways assignments can be designed and courses structured that can decrease the amount of procrastination.

Reference: Ackerman, D. S. and Gross, B. L. (2005). My instructor made me to it: Task characteristics of procrastination. *Journal of Marketing Education*, 27 (1), 5-13. ♥

Telling, Doing, Making Mistakes, and Learning

By Tami Mysliwiec, Berks-Lehigh Valley College, Penn State
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Recently, I was vividly reminded that my responsibility as a teacher involves more than telling. Teachers also have an obligation to provide a supportive environment where students can learn by doing and by making mistakes.

Several weeks ago, a colleague rushed into my office. He was off to a noontime meeting but without lunch. At my coaxing, he decided to fix one of my dehydrated standby lunches of Thai noodles. I warned him that preparing the noodles involved multiple steps. I heard him reading the instructions out loud. “Step 1: Remove all contents from tray. Remove noodles from bag and place back into tray. Add enough boiling water to cover noodles. Secure lid to tray. Let stand for

approximately 4 minutes.” At that point I remembered that I made a mistake the first time I prepared the Thai noodles. I interrupted my colleague and told him what I had done wrong. He nodded and continued to prepare the noodles. A few minutes later expletives emanated from near the microwave. I turned around to see my colleague making the same mistake — the very one I had just warned him about.

At that moment I realized that my colleague’s noodle-making experience was the perfect analogy for what we advocate in the classroom, learning by doing. Because I had made the exact same mistake, I blithely assumed that I could prevent the error by telling my colleague what to do. In fact, he needed to make the mistake in order to learn.

This learning by doing is an excellent example and extension of Dewey’s Experiential Learning Theory, which sug-

gests that everything occurs in a social environment. Learning is a process that includes knowledge, as facilitated and organized by the instructor, as well as, students’ previous experiences and readiness. As educators, we have a responsibility to provide students an environment where they can learn by doing, and that includes giving them the opportunity to learn by making mistakes. It is true that experiential learning takes longer. I could have made lunch for my colleague without error and in less time. But the cost would have been his learning and I would have to fix his Thai noodles henceforth. When we work with students we should aspire to create “teachable moments.” Those moments rarely come from “telling” the student what to think or do, but they often emerge out of mistakes students have made. ♥

We Seek a Candidate Committed to Teaching Excellence. . .

Ever see that on a job posting for an academic position? Ever served on a search committee looking for just such a candidate? Sometimes the job description calls for a “demonstrated excellence in teaching.” Around these grand phrases float clouds of vague meaning. What exactly does a candidate with a commitment to teaching excellence look like? How does a committee know it when they see it? How does a candidate demonstrate excellence in teaching?

Benson and Buskist (reference below) decided it might be useful to survey search committees with job descriptions containing these phrases and ask them to specify more concretely their understanding of “excellence in teaching.” Their sample (all from psychology, so perhaps not representative of all fields) included responses from search chairs at various kinds of institutions. Some interesting details emerged from the results.

Just more than half of these search

committees asked candidates to give a classroom presentation to undergraduate students — so for the other half, seeing an actual teaching sample was not needed to demonstrate teaching excellence. Thirty-four percent reported that they considered undergraduate reactions to the presentation moderately important; 55 percent considered those reactions considerably important, and 5 percent considered them primarily in deciding which candidate to hire. This means that 6 percent considered student reaction to the teaching presentation little or not at all.

In response to an open-ended question as to how they conceptualized and assessed teaching excellence, 77 percent of the search chairs reported using previous student ratings, 57 percent used letters of recommendation, 51 percent considered previous teaching experience, and 51 percent looked at applicants’ statements of teaching philosophy.

Of note here was what respondents

didn’t mention (at least not in significant numbers): commitments to experimenting with new teaching techniques, participation in instructional development activities, knowledge of teaching literature, interest in reading pedagogical literature, attendance at teaching conferences, or publications on teaching and learning.

The researchers conclude that in the case of psychology search committees, teaching excellence is not defined a priori. Rather, the definition is constructed as the search process unfolds. Is that different for search committees in other disciplines? Should the definition be constructed differently? What difference might that make?

Reference: Benson, T. A., and Buskist, W. (2005). Understanding “excellence in teaching” as assessed by psychology faculty search committees. *Teaching of Psychology*, 32 (1), 47-49. ♥

Study Points to Shortcomings of Group Work

So much research on group learning has now occurred, the results of any one study must be considered as part of these larger streams. Additionally, research on group learning includes such a wide range of group sizes and structures, tasks, and outcomes measures that comparing one set of results with another ends up being a kind of apples and oranges comparison.

But occasionally an isolated finding raises some questions and produces some results that justify looking at it individually. Donald Bacon notes in the study referenced below that group projects are now widely used in business school programs and that those using them rate improved learning outcomes as the most important reason for including them in courses. This study was precipitated by his concern with the design of group projects and how their current use violates some of the design features that have empirically linked group work and learning outcomes.

He specifies the problem: "In business classes [we think this is true of classes in many fields], the typical student group project differs in some important ways from the prototypical peer-learning tasks. On business projects, students jointly produce a 'deliverable' of some sort, such as a written report or group presentation. Each member of the group then often receives the same reward, typically the same grade." (p. 253) In much of the research where students learned well in group contexts, the task was structured so that students were still individually accountable at the same time the group shared some goals. In those conditions, students might produce a group project but additionally each group member would take an exam or write a paper demonstrating their mastery of the content covered in the group project.

These current design flaws led Bacon to the following hypothesis he set to test experimentally: "Business students will learn more project-related content when working on a project alone than they will when working in groups." (p. 256) In his

study, 277 undergraduate business students worked on the same group project either in pairs, or they completed it individually. Using a methodology described in the article, he assessed their learning of content related to the project with midterm exam questions. His hypothesis was confirmed.

Bacon identifies three reasons why he thinks content learning in the group projects might be less. First, is the problem of "social loafing," as it is called in the literature: some students slack off when they work with others. A very laid-back, not terribly motivated student gets partnered with someone gung-ho to get an A, and the laid-back student is happy to let the other student run with the project. Second is the problem known as the specialization of labor. Students in groups divide up the task, and frequently they volunteer to complete the part where their skills are strongest. If some group member is comfortable interviewing strangers, they will volunteer to complete that task, and someone else who likes to write will volunteer to write up those interviews. The problem of course is that students who may interview others well, may not write reports well. In this case, the group benefits from skill differentiation, but the individual with skill and knowledge deficits may not acquire them in the group context. And finally less content may be acquired because of something called coordination losses. Often students report that group work is more work than individual work, which seems counterintuitive. But groups have to find times to meet, they have to integrate individual work, and they may have to spend some meeting time socializing, for example. These kinds of costs diminish the amount of content learning that can occur in a group project.

Should instructors abandon group work based on these findings? Absolutely not. One study using a particular student cohort (business students here), working in a particular kind of group structure (two-person groups, in this case), complet-

ing a particular kind of task (interviews and written reports), and whose learning was assessed using a particular methodological approach (exam questions) does not support comprehensive conclusions as to the viability of group work. Should instructors carefully consider how they design group projects? Absolutely. Previous research and this study do verify one conclusion that should be obvious: group structures do not automatically increase learning outcomes — those that are carefully designed do are more likely to do so.

Reference: Bacon, D. R. (2005). The effect of group projects on content-related learning. *Journal of Management Education*, 29 (2), 248-267. 🍀

WELL-DESIGNED LECTURE

FROM PAGE 1

learning paradigm. Although we have adopted a high-tech approach, there are many paths to, and models of, a well-designed lecture. The pedagogical isolation that often exists in departments, colleges, and institutions are barriers to improving teaching and learning. Some faculty members who still deliver the stereotypical lecture may consider a move to the learning paradigm a quantum leap. However, the shift toward a greater focus on student learning through a well-designed lecture may be a viable and attractive path to them.

In reality, instructors in higher education are facing a struggle between efficiency and effectiveness, two common terms in business and engineering. When considering a redesign of the lecture format, one must strive to optimize the balance between these two measures of quality. The concept of instructional "design" is important because it allows instructors to respond to changing professional priorities, evolving institutional missions, and shifting educational paradigms. 🍀