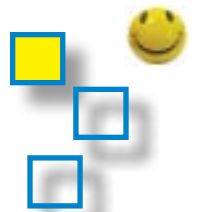


# White Board



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## Backward Design, Forward Progress

READERS OF FACULTY Focus are probably already familiar with backward design. Most readily connected with such researchers as Grant Wiggins, Jay McTighe, and Dee Fink, this approach to course construction asks faculty to initially ignore the specific content of a class. Rather, the designer begins the process by identifying desired learning goals, and then devising optimal instruments to measure and assess them. Only thereafter does course-specific content come into play—and even then, it is brought in not for the sake of “covering” it, but as a means to achieve the previously identified learning objectives. Courses designed this way put learning first, often transcend the traditional skillset boundaries of their discipline, and usually aim to achieve more ambitious cognitive development than do classes that begin—and often end—with content mastery as the primary focus. Although the advantages of backward design are manifest, it’s probably still the exception to, rather than the rule of, course planning.

Yet, backward design has benefits beyond those outlined above. Just as the technique is advantageous to the students we teach, it is valuable to our own growth trajectory as educators, and serves as a useful bridge to interactions with faculty outside of our disciplines.

### Making tough decisions

First, (re)designing a course via backward design forces us to step back from our fields of expertise, which we know so well and hold so dear, and approach the learning process as novices. That is to say, we are so familiar with our disciplines and their content that it’s hard to imagine anyone not endowed with such knowledge or a burning desire to acquire it. Even more importantly, we love the content that makes up our fields, and it can be downright painful to imagine excluding parts of it for the sake of skill development or the realities of semester time limits.

Backward design forces us to make tough decisions about what content is really needed for our students to achieve their learning goals. Maryellen Weimer writes that our attitude toward basic content “has always been dominated by one assumption: more is better” (p. 46). If that construct embodies the typical “coverage” approach, then perhaps “just enough content—and no more” could define the course built around backward design principles. And in forcing us to make fundamental decisions about learning and the role of basic content therein, we must confront the very nature of what we seek to achieve as educators. Is it simply for students to know a lot about our field? Or is it primarily for them to develop the habits of mind that typify practitioners? The former aims low at the Bloom’s Taxonomy target, while the latter requires an elevated trajectory.

Ken Bain writes about “expectation failure” (p. 28) as a necessary component to students’ cognitive breakthroughs. That is, students must be placed in a situation where they realize their extant ways of knowing won’t serve them adequately. Only then can they make their way through the “learning bottlenecks” (in the language of Díaz et al.) which populate our fields. I’d like to push Bain’s analogy further: it is often only through our own expectation failures that we as faculty can devise more authentic and meaningful learning experiences for our students. For better or for worse (and usually it’s for worse), most of us started out teaching the way we’d been taught ourselves—and many of us still do. Only when we realize that these approaches can’t achieve our desired learning goals do we stare into the instructional abyss to contemplate the fundamental riddles of education. If we’re lucky, we can seek help from a peer, or stumble across a good pedagogical read. And if backward course design is deemed a solution, we just might squeeze through our own instructional bottleneck and offer something so much better.

### Breaking down silos

Second, it is precisely this type of work—the fumbling, the grappling, the eureka moment—that allows us to bridge the chasms between ourselves and faculty in other fields. Too often we remain siloed in our disciplines, knowing little about what our brethren do and assured they couldn’t possibly understand us. But if we momentarily remove discussion of specific course content and focus instead on desired learning goals, we find that we actually have a great deal in common. Is clear and correct writing a goal only of composition classes? (Of course not.) Do we relegate critical thinking to the field of logic? (I sincerely doubt it.) Are group work, information literacy, and quantitative reasoning skills that can be developed and synergized across a broad spectrum of classes in disparate fields? (Absolutely.) Conversations and workshops about backward design necessarily raise these issues, help us emphasize the commonalities (rather than the differences) of seemingly unrelated fields, and serve as

see BACKWARD, Page 2

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## How Teaching is Like Composting

I STARTED COMPOSTING at our summer place in 2009, and now I'm a convert. In the summer, we live on an island that's mostly rock covered with something the locals call "organic matter." Growing anything this far north on this soil base is challenging, but compost has made a big difference. My bleeding hearts, campanulas, delphinium, phlox, and coral bells are far more impressive than they used to be.

I wrote a blog post about composting when I first got started with it, and it seemed that it might merit a revisit. My thinking back then was that education was a process similar to composting. "You take a disparate collection of ideas, information, and toss them into a student." (I'd add skills to the list now.) Good compost is a 50/50 blend of greens and browns (food scraps and garden detritus), layered in and mixed regularly. The booklet that accompanied my composter recommended chopping up items before adding them. Most of us do chop our course content into smaller pieces for our students, but courses continue to be very separate learning experiences.

Also, composting is expedited with regular mixing. We ought to be mixing our various course materials more regularly and systematically. Left on their own, students don't push themselves to make connections between the content in the different courses they take. You can see that in how they organize their materials. They have a separate notebook or computer folder

for each course. They don't want to get their courses mixed up, and with different assignments, requirements, and due dates, that makes sense. But in my composter, eggshells mix with coffee grounds, banana peels rub against corn husks, and pine needles poke out of everything. The mixing makes the individual items less recognizable and more like parts of a whole—just like messy problems blur and blend the boundaries between knowledge domains.

The goal of composting is what comes out at the end—brown, nutrient-rich soil. Oh, you can still see bits of eggshell and the occasional avocado pit, but it's mostly dirt with a wonderful, earthy smell. At the end of four years (or sometimes more), students come out of the educational composter looking and acting a whole lot different than they did when they first entered. At graduation, the effects of individual courses and teachers are indistinguishable from the outcome of the whole experience.

We can stand in awe of the process, but what happens in the composter really isn't all that mysterious, and it certainly isn't beyond our ability to control the process in significant ways. For example, we know that for best results, we should place the composter out of direct sun and dry hot winds. The transformation of food scraps and leaves into soil is accomplished by microorganisms that need the right balance of oxygen, water, and nitrogen. Compost is a living thing that doesn't tolerate neglect well. Likewise, we

can create classroom climates that promote learning. With care, attention, and the right balance of intellectual nutrients, students also grow and develop more impressively.

The microorganisms responsible for transforming the greens and browns into soil do most of their work in the warm core of the composter. Education that changes students also happens at the center of who they are as human beings. It changes how they think about themselves, what they believe about others, and what they aspire to accomplish in the world. These aren't the kind of changes you can see happening. Nothing looks all that different from day-to-day or in one course, but in a healthy compost heap, the microbes are always at work.

Compost accomplishes a variety of purposes. It improves soil structure by binding particles together. It aerates clay soils and helps sandy soils retain water. If the pH of the soil shifts, compost acts as a buffer, protecting the plants. Education accomplishes just as many varied purposes. It enriches the lives of individuals, enables cultures to look for connections beyond their borders, and makes democracies work. Educational composting isn't always glamorous, but it's a worthy endeavor.

Maryellen Weimer, PhD; "How Teaching is Like Composting;" *Faculty Focus*; May 11, 2016; [ <http://www.facultyfocus.com/articles/teaching-professor-blog/teaching-like-composting/> ] June 2, 2016

### BACKWARD

Continued from Page 1

vehicles to interdisciplinary empathy and cooperation in ways that content-based curriculum development fails to do.

In the 1998 film *Patch Adams*, Robin Williams plays a physician with quirky but effective approaches to helping his patients. When questioned about his focus on the patient rather than the disease, he replies, "You treat a disease, you win, you lose. You treat a person, I guarantee you: you'll win, no matter what the outcome." I think there's a parallel here for course design. Lead with content, and maybe the more ambitious learning happens, maybe it doesn't. Lead with learning goals, as epitomized by backward design, and educational outcomes

can't help but have an impact on students' development. And in adopting such a scheme, we become a more self-aware and interconnected faculty. It's hard to see a downside.

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