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Their Work and Why They Do It

What changes do you hope a semester's work will provoke in your students? How does your plan for the term make those changes possible—or, better, probable? What happens if the syllabus is a design for change?

Students fail assignments. And sometimes, assignments fail students.

Understanding the difference requires from us as teachers a quality of near-heroic endurance and a healthy mixture of self-doubt and self-confidence. Self-doubt because any time students are failing, we need to ask whether those failures stemmed from our assignments. Self-confidence because we do, in fact, know a lot more than our students about our disciplines.

Students fail assignments because they are distracted, overwhelmed with work in other courses, unprepared for your course, working too many hours as they try to cover rent, dealing with extracurricular challenges, or simply uninterested or indifferent. If a bored student falls asleep in a class on forestry, is the student really bored? Maybe, but it's up to us to understand more deeply what we mean when we sense that the class and the student aren't in sync. There are lots of reasons a student can be unconnected from what you're trying to do.

In contrast to these scattershot sources of student failure, assignments fail students *by design*. That is, by their nature, poor assignments induce unproductive failure. A good example is the writing prompt that looks for the student to say exactly what the teacher would have said. Of course, we nearly always construct these failing assignments with the best intentions.

So what's a good assignment, and how do we know one when we see one? It's easy to think that a good assignment is good in some independent way: artfully conceived, clearly written, neither too difficult nor too easy. But if we want to connect all the pieces of a course together, we can only really evaluate an assignment in relation to the assignments that precede it and follow it. That is, it's not enough to produce a good assignment or even a semester's worth of good assignments. The goal is to produce a *sequence* of them. Thinking pedagogically, the chronological passing of time is not a sequence, in and of itself. In a good sequence, things happen.

Good sequences of assignments minimize unproductive failure—and induce the right amount of productive failure. The good sequence of assignments is good not only because it works out a progression (of tasks, of ideas) but because it embeds students in a narrative. Faced with increasingly difficult challenges, students will, to varying degrees, overcome them and emerge transformed. The good sequence of assignments doesn't guarantee every student an A or even a B, but the well-ordered progress of tasks can leave even the C student feeling like a success.

The syllabus is your best opportunity to improve the odds that your assignments will succeed. Working from that early vantage point before the course begins, you can think about your future students' work divorced from the complex personalities and abilities they bring with them. You can focus on *the work* they are making. You do this because you are not teaching the material—you're teaching students, and the best

way to do that is to start from the work you as the teacher need them to do.

Starting from the Work

Here's a thought experiment meant to help you sharpen that focus. Imagine that the content of your course—whatever material students must work with, such as equations, procedures, the content of lectures, reading, and so on—has been chosen for the single purpose of enabling and supporting the assignments that students will complete. Imagine, in other words, that you had to come up with the assignments *first*, and everything else, from lecture topics to textbooks, *afterward*. What would you need to do?

You might have any number of good reasons to object to such an approach. In the physical sciences, for example, there are concepts that appear to transcend our apprehension of them; the point is the knowledge, not a set of skills. It is also obviously true that without a body of knowledge to communicate, assignments become meaningless—they cannot, in fact, be separated from content. We aren't asking you to abandon such objections, and we aren't asking you to build a course entirely out of assignments. We are simply asking you to *pretend* to do so, for the sake of the insights you might gain. It's the thought experiment that counts.

Such a shift in thinking can reframe coursework's purpose from evaluating and ranking students' mastery of content to learning the facilities, developing the habits of mind, building the knowledge, and embodying the ethos necessary to work in your discipline. Notice the shift in the prior sentence: Those first verbs—evaluating, ranking—belong to the teacher, while the second set—learning, developing, building, embodying—belong to the student.

In this thought experiment, then, students do work in some particular order, and this order becomes the underlying narrative of your course, a narrative within which students—these students, in this class—are very much present.

Imagine the experiences of your students as they progress through the work you'll assign. It's helpful to start from the final work you hope to get from them, the thing they should be able to do at the end of the term. Whether it's a final project, an exam, or a performance, name—out loud, at least to yourself—the component activities students will need to perform to a high level in order to succeed in this final work: Doing *x* really means doing *a*, *b*, *c*, and *d*. Now think about how students will learn the right articulation of these activities, how they'll master each individually and in concert.

Or try to. And fail. Because *this* is the core of teaching, and it's incredibly difficult. You, the teacher, *will* fail, but you will also succeed, with any luck, at least a little, if you look at your own practice and speak with your colleagues about their practices.

When people repeat the adage that if you really want to learn something, you ought to teach it, this is the hidden logic of their claim: What you've figured out how to do yourself, what has become instinctual to you as a practitioner or a scholar, will remain a sort of mysterious, magical power until you ask yourself how you *actually* do it. Becoming self-aware of those practices is like being a computer that has just figured out how to explain binary to itself.

This principle suggests the paradox of our central claim that it's not about what you do but about what they do. It's *not* about what you do because teaching is about learning, mostly your students' learning. It *is* about what you do in the sense that you're teaching them some of what you know how to do, and *now you have to figure out just how the hell you do those things*, which is no small feat.

If this thought experiment is getting harder now, that's because it's as hard as the hardest and most rewarding intellectual work you've performed yourself. It's one thing to have the brilliant thought that enabled you to finish your first book, the insight that led to your first article. It's another thing to understand how you had the thought and how you can now help others think *like that*. Not to think that exact same thought but to develop the instincts and abilities that enable them to think in the special ways your discipline thinks.

Work in stages, just as you teach your students to do. First, write out what you want your students to be able to do and then name qualities you want that work to have. Think about how you do those things yourself. When you're working through a problem and trying to write about it, which activities are nonnegotiable? Which are unavoidable gateways on the path to a finished product?

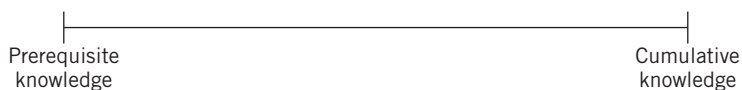
Now move from you to your students. What's really going on in a student's growth over a semester of work when your assignments are calibrated well? Multiple, simultaneous forms of development that overlap, pull at one another, and feed one another. We can think of these forms of development as *narratives*, stories about how your students are being transformed by the work.

Of Students and Stories

How can we imagine the ways our students will change, the ways they might see both themselves and the material differently, as they work through a well-designed sequence of assignments?

The most concrete indicator is the growth of your students' understanding of content. That understanding is familiarly, and simply, referred to as *knowledge*—which is never one

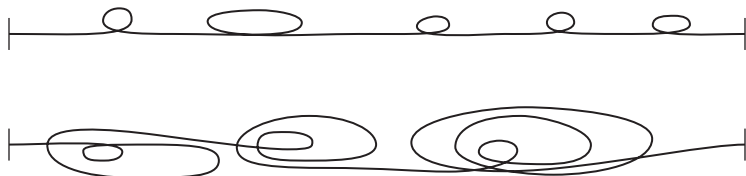
thing. We who teach will recognize the distinction between prerequisite knowledge (the knowledge brought into a class) and cumulative knowledge (the knowledge gathered, shaped, and developed over the length of the course).



It's necessary to differentiate between a prerequisite *course* and prerequisite knowledge, as the former certainly doesn't guarantee the latter. As your experience has surely borne out, students routinely enter a course lacking the kinds of knowledge that your syllabus assumes they have. Some may come with more knowledge of the subject than you might at first assume, but the odds are good that most have far less. Let's leave aside the question of whether it's your responsibility to accommodate these students; you'll want some premeditated strategy in place for how you'll quickly ascertain who does and does not have this knowledge. And you'll want a plan for what to do about those who do not. These are matters of assignments, too.

This narrative is straightforward in the sense that students begin mostly lacking the knowledge they'll gain in your course. They gain it, or they don't, and then the term's over.

Of course, it's never this simple. Our first diagram of a student's movement from not-knowing to knowing isn't quite right. Students' paths to knowledge more often look like the next two drawings.



The point is that the way we gain knowledge is nonlinear and recursive, so you'll want to plot and anticipate moments of repetition, regression, leaping ahead. Student development is uneven. It's wise to remember that the apparent linearity of our syllabi can fool us into forgetting what learning is really like.

Prerequisite knowledge isn't only about facts and theories. Not just about *know*, but about *know-how*. Your students begin a semester not knowing how *to do* at least some of the things you want them to do. They lack not only prerequisite knowledge but prerequisite know-how.

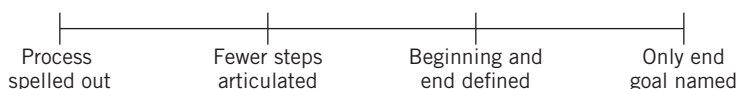
This is visible when, for example, you give them a writing assignment that asks for finished work in response to what you thought was a reasonable question. You get back essays that clearly skipped steps. The evidence they mount seems picked at random. Their theses are, mostly, poorly informed opinions. "I think this or that" papers are less about thinking than opining.¹

To opine isn't enough. (Asserting is often only opining loudly.) You're teaching thinking as process, and process stages what we write, starting here and ending there. You want your students' understanding of how to move from the beginning to the end—of any disciplinary activity—to grow over a term. At the start, they may need every step laid out for them. But by the last weeks of the semester, they may need only an end goal or just an area of focus named in the assignment.

For teachers who are experienced practitioners and thinkers in their fields, there are a number of actions that have become nearly automatic. These actions verge on or are forms

¹*Opining* is a good word that gets less use and respect than it might. An *opinion* is the outcome of opining. A student might be shocked to be told that the paper is nothing more than that student's opinion, though that is probably the truth. Or shocked that you're not especially interested in an opinion and would prefer reasoned argumentation.

of embodied knowledge, something like the way a pianist's hands find solutions to potentially difficult fingerings. Experienced pianists don't need teachers to solve problems for them. Students often do. But good teachers will work to free students from their tutelage.



Typically, this means crafting a syllabus that initiates a movement from a certain amount of hand-holding to an expectation that students will know how to take themselves from step to step on their own. The experience that will allow students to make such progress is partly a matter of range and repetition—trying lots of different challenges many times, failing, and then learning to succeed.

In these repetitions, students build a facility with the processes necessary to your discipline's work. They also build a set of more abstract ideas and understandings that will inform and shape their work, something like the way the keel determines a boat's handling.

In most cases, your students learn through a continual movement back and forth between concrete activities—looking at things that really happened, examining objects of analysis, following lab procedures—and abstract understandings of those activities. Students see something happening a certain way—a precipitate forming, a literary technique unmasking a character's thoughts, a price changing in a particular market—and they see several variations of these phenomena. They learn to name what is happening, to conceptualize the phenomena: solubility, interiority, elasticity.

With continued work, students survey an increasing stock of concrete material—more case studies, experiments, time spent with patients, problem sets—and thus build a larger

stock of related concepts. Ideally, they become self-aware, conscious of how they are making these movements, too.



Facts and Concepts

If an assignment is an opportunity for you to teach your students how to think about things, then the objective of the assignment is both the thing—usually a bunch of facts, though sometimes a theory or argument or even experience—and the process of thinking about the thing (Homer's *Iliad*, thinking about Homer's *Iliad*).

The very best students will be on to this game. They'll understand that the goal of an assignment is twofold. More: They'll even develop a useful doubt about how well a concept accurately or completely maps the reality of any given phenomenon. Higher-order thinking in most disciplines involves a careful, continual evaluation of our explanatory/analytical frameworks. To get there, students need a large number of concepts in hand and opportunities to test them against various bodies of phenomena.

This movement toward greater conceptual awareness thus parallels another type of student learning: the growth of students' comfort with ambiguity and discovery of the unfinished work that drives continued research.

Facts or concepts? Facts and concepts and strategies? A good assignment may teach all of these, though we'll have a better chance of reaching our goals if we make clear to ourselves what those goals are. We often teach students simplified models—models that are perhaps even a little bit wrong—earlier in their

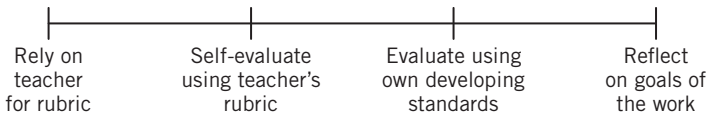
education: the supply and demand curves of Economics 101, the equations of Newtonian physics, pH scales built entirely around H^+ concentrations, or even the idea that you can't start a sentence with a conjunction. And then exceptions, caveats, or even whole competing explanatory models enter the room and give students the problem of uncertainty and the gift of nuance and paradox. They learn to think dialectically and to enter debates in your discipline, sometimes even if they're nonmajors.



The development of students' comfort with ambiguity and debate is a powerful stage of cognitive maturity.² If the student is beginning study in a professional field, this cognitive maturity enables the student to begin to think like a practitioner. One of the open secrets of every field is the necessity of developing comfort with its most difficult or even unresolved problems. These, after all, motivate continued work in a discipline. As students learn this comfort—which is as much a kind of emotional maturity as it is intellectual development—they learn something important about the complexity of practicing your discipline and also about the complexity of the world itself. They also develop an ethics of quality—deep, moral understanding of the importance of practicing your discipline or profession the right way—and an awareness of what good work looks like. Practically, this means developing in the student an ability to evaluate one's own work and to offer quality feedback to peers. Philosophically, this means passing on the flame of our work to new generations who will understand that to practice the work well, to the highest standard, is an ethical obligation.

²As it surely is for us as teachers, too.

Beginning students often need some kind of rubric to make clear the standards by which their work will be judged. In such a rubric, the teacher lays out exactly what's required: the work must be so long, must adhere to such a format, must check certain boxes. But later, as the students' knowledge grows, they come to know what good work looks like from a charge they get when they see something glorious or shoddy, or from seeing a teacher react to excellent or problematic work that students, or even professionals, have done.



When we talk about how to evaluate work—revealing our own perspectives and metrics—we're also preparing students to read work not their own. Grading provides a degree of the “norming” that students need, as does exposure to a wide variety of work that others have completed. “Show me your work,” the teacher says to the student, but there's a different benefit in sharing what other students have done, valuable in a way that top-down, teacher-student interactions, as important as they are, cannot be.

A caveat here is that students need to learn how to articulate, in their own words, the ideas and arguments others have advanced, without flattening the complexity of those ideas. It's a key goal of teaching and learning: how to critique without judging simply—or simply judging. James Baldwin doesn't say that “racism is bad”—end of story—but students like to claim that he does.³ To build this sense of professional ethics and

³Of course, he doesn't say it's good, either. Part of his project was to move beyond moralizing and suggest how too-simple ethical systems have enabled and even constituted racism. He *shows* how racism works and why it's so destructive to all of us. Baldwin, by the way, is an excellent resource for showing students what nuanced thought looks like and sounds like.

taste, students must first give themselves over wholly to the material before they respond to, critique, or challenge it. Like initially reluctant participants in couples therapy, they should grow into adults able to say what others have said before, and able to say it in all its richness, as though it were their own. As they mature, they gain the power and ethical ground from which to respond.

This holds true as much for their responses to, say, the political theorist Wendy Brown or to the architect Zaha Hadid as it does for their response to their peers in an in-class workshop or out-of-class peer feedback. Our planning for assignments can build in moments for careful and respectful responses.

What's most important here is for students to develop a sense of responsibility to the intellectual community in which they're participating and to which they hope one day to make a contribution. This responsibility includes a willingness to receive criticism that is made in good faith and the ability to internalize that criticism as they develop a sense of professional ethics.

Like the strongest teachers, the strongest students typically moderate a reasonable confidence with conscious self-doubt. They know they can fail, and in fact welcome productive failure from which they learn, but strive to limit failure incrementally or at least aspire to higher-order failures. And with growing to know what good work looks like comes an increasingly individualized sense of taste. Taste can mean radically different things in different disciplines and still other things depending on whether students are pursuing a course in their major or out of it. Taste is connected to specialization but also to voice and identity. What kind of practitioner, researcher, and thinker will a particular student become? How will learning to do this work in an area outside their specializations affect them in adult life?

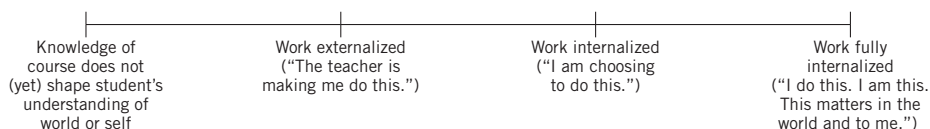
Our students must discover this themselves through a hard-won vision of what they would like their own work—vocation or avocation—to look like, and the wisdom to know the difference between what is idiosyncratic to their aspirations and what the broader discipline requires. Knowing this difference will determine whether they can be responsible citizens of a disciplinary community. It's important that they understand community standards and avoid insisting that others adhere to rules they can rightly set only for themselves. In many courses, we don't expect that our students will ultimately practice professionally in the discipline, but we still hope that the way our discipline goes about studying the world will make up a part of how *our students* study the world in their everyday lives. Discovering who they'll be as engineers or philosophers, managers or anthropologists or graphic artists is finally the narrative of student work that matters most. And sometimes students discover part of who they'll be as engineers in a musicology course. It's the story of students becoming something more than students.

Story, however we understand it, is important. Here it's the story of how assignments become something more than assignments and how students learn to embody the practices of a discipline. It's the story of students learning how to be ambitious, how to choose the work for themselves. It's the story of students growing up. Even if a student is enrolled as a matter of meeting distribution requirements, this path toward becoming is the goal.

What do we really want? We want them to be transformed by the work they do in our courses. And we want them to want to be transformed.

In other words, the dominant narrative, the one that every other part of the developmental work you've designed aims to realize, is a story of *motivation*. We *can* teach motivation, contrary to what many of our own teachers may have believed

decades ago. Motivation isn't "you've got it or you don't." As we educate more students whose parents may not have had access to higher education, let's not assume that a desire for any particular type of knowledge is some deep, intrinsic quality. A great syllabus orchestrates students' discovery of their reasons for pursuing work this term, why the course matters to them and to the world they know. It changes who they are when they're working—changes them from a captive audience doing what the teacher asks to a group of individuals excited by each new discovery. No student does excellent work—even or especially required work—they haven't *chosen* to do themselves.



As we argued in our discussion of the classroom community, students need opportunities to write, think, and converse about why they're performing the work of your course. While it may sound hokey on its surface, giving students this space and taking it seriously as an intellectually rigorous part of professional practice can transform a reluctant student into an eager one.

Some idea of "knowledge" untethered from their experience of the world can feel, to students, meaningless or alienating. That's why we need to get the assignments right. The *OED* suggests the earliest, and still current, definition of *assign* as: "to allot, appoint, authoritatively determine." We could read in this definition the implication that the one doing the assigning has significant power over the one being assigned, as in one of the senses that follows under it: "to make over a convict as an unpaid servant."

Most of us hope our students don't feel as though they've been forced into indenture. But the definition also contains a

competing sense—“to transfer or formally make over to another”—in which the person being assigned is given something. The assignment is not simply an “authoritative determination” that your students must do something. It is also a gift. Beyond that, the word contains a further sense of *assignment* as an appointment to “an office, duty, or fate.” To be assigned is, in some ways, to *become*, to be granted a role and maybe even to be granted the fulfillment of a destiny.

Putting It All Together

As much as the diagrams above may imply complex processes of growth, students experience all these transformations through discrete assignments. Faculty ask their students to complete an enormous range of tasks: problem sets, essays, case studies, presentations, technical reports, musical performances, harmonic analyses, posters, memos, proofs, paintings. Most of the world of human activity can be assigned.

Yet we typically limit ourselves to the handful of established forms in our disciplines. In upper-level, reading-intensive courses, we ask for the response paper. In engineering, the technical report. And across many, many disciplines, at an enormous cost of class time, there’s the ubiquitous presentation.

Do you actually enjoy watching student presentations? Do you get the sense that the students like doing them? What is being accomplished by the presentation (other than your nudging them not to say “like” and to stop fidgeting so much) that you can’t get at any other way? When we ask students to present something, what are we testing for? Rhetorical skills, content knowledge, theatrical flair, IT facility? If we don’t know—and don’t make clear to the student what we expect—we’ve failed them before they’ve had the chance to exercise their agency.

Every established form of assignment has its failures that rest in plain sight, invisible because they're what we've done for so long. Many or most of these failures hinge on whether we have thought through the entire range of goals we could reach by asking students to perform this work. The care plans that nursing students write up analyze a patient's needs and build a strategy to help them, but what more could they do?

This question—what more can my students get out of *their* assignments?—starts to become more provocative when we ask it of *the totality of assignments in a syllabus* in relationship to *the story of your students' development across a term*. It can take courage to leave behind the standard assignment structures with which we're most familiar: two or three exams, or perhaps three papers, or perhaps a single big technical report, all of which function largely as an evaluative mechanism bolted onto the real course—the content the teacher delivers to students. Our syllabus might look odd to colleagues when it includes a robust body of assignments calibrated to different goals. But if student work is the engine of a course, then the assignments are the creative center of our teaching practice. That's the kind of sequence we're arguing for.

The assignments we craft are limited only by our own creativity and by our determination of their effectiveness when we try them out with real students. Assignments may enable students to become more aware of their progress in the course, or to build one particular ability that's a threshold to the bigger, more difficult work they'll do next, or to fail at a task they can't do yet—simply because you know that your students come to you not knowing how to fail, not knowing that failing well is an important skill.

Assignments might task students with going out into the world at large to find something to look at in relation to a principle, idea, or text under consideration in class. They

might ask students to think through course material via a different discipline. They might ask students not to solve a technical, mathematical, or scientific problem but to explain how and why they *would* solve it a certain way.

In place of presentations, students might hold mock academic conference panels, sharing and discussing a semester's worth of work in front of an audience of students, with a goal of generating a rich intellectual conversation among the entire class. Or they might be given specific imaginary (or real) audiences to which they must calibrate a talk, paper, or poster, rather than the more immaterial and abstract idea of simply addressing the class. (When in life—including our own professional lives—do you address a group of other people without a specific purpose in mind other than to “get a good grade”?) They might invent a metaphor that translates a difficult concept into different terms, so that more people can find their way into it. Think of close reading as an act of attuning a text and reader so that they arrive at a resonant frequency—that tendency of certain objects to buzz in harmony with one another, even if they're not physically touching.

In place of a draft of a research paper, or before a draft, students might hand in a body of notes they've taken, with quotations copied out of a variety of sources together with their thinking about those quotations—a form of note-taking many of us perform in our own professional practice but that is likely to be an unfamiliar strategy to many students. That will, of course, require the teacher to explain what is at risk (taking creative or speculative chances) and what is at stake (the possibility of an intellectual payoff) in the work we all do at the beginning of a project—and how it connects to the finished work they'll eventually hand in.

Imagine assignments that are not simply about downloading a document from the course management system or

opening the required textbook, assignments that force students to set foot in a library (gasp), speak with other students, or hand in notes on their own finished, already-graded work.

Take it even further: Test your students' ability to know what sort of work is necessary to achieve a goal you set by asking them to *write their own assignments*. Yes, this is not uncomplicated, but hear us out. You could grade the assignment they write, itself, for its ability to recognize what the next steps are in your course's work. Or you could grade both the assignment they've composed and the work they've done in response to it.

Should all the assignments be spelled out in the syllabus? In practice, we know that our best-laid plans *gang aft agley*. That's Scots English for getting totally screwed up. Robert Burns uses the phrase in his "To a Mouse," in which he concludes that when our plans go "agley" the result is "grief and pain" instead of something he calls "promised joy." We're not suggesting that joy is the intended outcome of giving your syllabus a rethink, but the avoidance of grief and pain does seem like a good idea.

Many of us will need to leave space for variation in the term, but all of us benefit from looking more closely at the sequence of assignments as a whole, in order to see how well it tells the stories we've laid out here. A course's assignments can be organized according to a straightforward logic of accumulation and forward movement: Assignment 1 tests the students' mastery of the material in Unit 1, Assignment 2 tests Unit 2, and so on. Or Assignment 1 makes sure students have studied the material for Class 2. But when you begin asking how Assignment 1 relates to Assignment 2 and to Assignment 3, you may find new functions for old forms, or you might discover that you want new types of assignments to accomplish your goals, which ultimately need to be, or become, the students' goals.

Now, let's deal with the other side of all this productive student work: The fact that *you* have to do something with it, as well as to make sure students show up (on time) with it, and keep them from cheating on it. Let's think about how our own work can honor and make the most of their work.

