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What 'Learning How to Think' Really Means

By Barry Schwartz

It has always been taken as self-evident that higher education is good for students and society at large, and that American colleges and universities are doing an excellent job of providing it. No more. Commentators, politicians, and parents are expressing serious doubts, about whether colleges are teaching what they should be teaching and about whether they are teaching it well. Demands for accountability are everywhere, spurred in part by the absurdly high cost of a college education and the trillion dollars in student debt. What are students getting for all that money? What *should* they be getting?

Two years ago, the Obama White House launched an admirable initiative to make college more affordable and accessible. A part of that initiative was an insistence that colleges be held accountable — that federal aid be tied to measures of performance. This accounting was to be done of both graduation rates and the earnings profiles of graduates, an attempt to measure educational value literally, by asking if the cost of a college education pays for itself. Recently the Brookings Institution moved us a further step in that direction when it introduced a rating system that ranks colleges by the midcareer earnings of their graduates, student-loan repayment, and the projected earning power of the occupations that graduates pursue.

Many academics regard this reliance on financial outcomes as an indicator of educational quality as philistinism, but one cannot reasonably expect students or their parents to shell out a quarter

of a million dollars (the price of many highly selective institutions) and be indifferent to what they will earn when they graduate. Besides, if earnings are not a good measure of educational value, then what is? Colleges can't get away with smug silence on that question any longer. Society demands an answer.

Colleges and employers alike say they want students who know how to think. But what does it mean to "know how to think"?

Universities that offer specialized training in specific professions have an answer: "We're training the next generation of nurses, accountants, physical therapists, teachers, software engineers, etc., etc." Whether they do it well or not is a legitimate issue, but that they *should* be doing it is not much in dispute. For programs in the liberal arts, however, the answers are not straightforward. You often hear defenders of liberal-arts education suggest that their goal is less to teach the specifics of a particular discipline or profession than to teach students how to think. It is hard to quarrel with this goal, and it is echoed by those who frequently intone about how fast the technological world is changing and how important it is to have a flexible and innovative work force. Just as the academy wants to teach students how to think, employers want to hire students who know how to think.

But what does it mean to "know how to think"? Is there one right way to think? If so, what is it? Every educator wants students to learn how to think. But nobody really knows what that means. We have to do better. We have to specify in greater detail what "learning how to think" requires and then ask ourselves if colleges and universities are meeting this goal.

Knowing how to think demands a set of cognitive skills — quantitative ability, conceptual flexibility, analytical

acumen, expressive clarity. But beyond those skills, learning how to think requires the development of a set of intellectual virtues that make good students, good professionals, and good citizens. I use the word "virtues," as opposed to "skills," deliberately. As Aristotle knew, all of the traits I will discuss have a fundamental moral dimension. I won't provide an exhaustive list of intellectual virtues, but I will provide a list, just to get the conversation started.

Love of truth. Students need to love the truth to be good students. Without this intellectual virtue, they will get things right only because we punish them for getting things wrong. When a significant minority of Americans reject evolution and global warming out of hand, the desire to find the truth can't be taken for granted.

It has become intellectually fashionable to attack the very notion of truth. You have your truth, and I have mine. You have one truth today, but you may have a different one tomorrow. Everything is relative, a matter of perspective. People who claim to know the "truth," it is argued, are in reality just using their positions of power and privilege to shove their truth down other people's throats.

This turn to relativism is in part a reflection of something good and important that has happened to intellectual inquiry. People have caught on to the fact that much of what the intellectual elite thought was the truth *was* distorted by limitations of perspective. Slowly the voices of the excluded have been welcomed into the conversation. And their perspectives have enriched our understanding. But the reason they have enriched our understanding is that they have given the rest of us an important piece of the truth that was previously invisible to us. Not *their* truth, but *the* truth. It is troubling to see how quickly an appreciation that each of us can attain only a partial grasp of the truth degrades into a view that there really isn't any truth out there to be grasped.

Finding the truth is hard. Relativism makes intellectual life easier. There is no need to struggle through disagreements to get to the bottom of things if there is no bottom of things. Everyone is entitled to an opinion — the great democratization of knowledge.

Love of truth is an intellectual virtue because its absence has serious moral consequences. Relativism chips away at our fundamental respect for one another as human beings. When people have respect for the truth, they seek it out and speak it in dialogue. Once truth becomes suspect, debates become little more than efforts at manipulation. Instead of trying to enlighten or persuade people by giving them reasons to see things as we do, we can use any form of influence we think will work. This is what political "spin" is all about.

Honesty. Honesty enables students to face the limits of what they themselves know; it encourages them to own up to their mistakes. And it allows them to acknowledge uncongenial truths about the world. Most colleges encourage a kind of honesty: Don't plagiarize, don't cheat. But it is uncommon to see students encouraged to "face up to your ignorance and error," or "accept this unpleasant truth and see how you can mitigate its effects instead of denying it."

Fair-mindedness. Students need to be fair-minded in evaluating the arguments of others. There is a substantial literature in psychology on what is called "motivated reasoning," our almost uncanny ability to emphasize evidence that is consistent with what we already believe, or want to believe, and to ignore evidence that is inconsistent. This may be especially true in the moral domain. As the psychologist Jonathan Haidt pointed out in his book *The Righteous Mind* (Pantheon, 2012), people use reason more like a lawyer who is making a case than like a judge who is deciding one.

Humility. Humility allows students to face up to their own

limitations and mistakes and to seek help from others. As Carol Tavris and Elliot Aronson wrote in their book, *Mistakes Were Made, but Not by Me* (Harcourt, 2007), we often hear people use passive constructions when describing failures. Students say things like "I got an A," but "she gave me a C."

Perseverance. Students need perseverance, since little that is worth knowing or doing comes easily. At the moment, we're cultivating the opposite. Worried that our students suffer from collective ADD and will give us bad course ratings if we make them struggle, we are dumbing down our courses to cater to short attention spans. We assign a TED talk instead of a journal article; a popular (and short) book instead of a scholarly one. We don't appreciate that perseverance (or the related attribute, "grit") is more like a muscle that needs to be developed than a natural resource that needs to be excavated.

Courage. Students need intellectual courage to stand up for what they believe is true, sometimes in the face of disagreement from others, including people in authority, like their professors. And they need courage to take risks, to pursue intellectual paths that might not pan out.

Good listening. Students can't learn from others, or from their professors, without listening. It takes courage to be a good listener, because good listeners know that their own views of the world, along with their plans for how to live in it, may be at stake whenever they have a serious conversation.

Perspective-taking and empathy. It may seem odd to list perspective-taking and empathy as intellectual virtues, but it takes a great deal of intellectual sophistication to get perspective-taking right. Young children "feel" for a peer who is upset but are clueless about how to comfort her. They try to make a crying child feel better by doing what would make them feel better. And teachers, at all levels, must overcome "the curse of knowledge." If they can't

remind themselves of what they were like before they understood something well, they will be at a loss to explain it to their students. Everything is obvious once you know it.

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Perspective-taking and empathy pay enormous dividends in professional life. In his wonderful book, *Critical Decisions* (Harper Collins, 2012), Peter Ubel, a professor and physician at Duke University, makes a compelling case that while the physician paternalism of the old days is happily gone, it has been replaced by an equally inadequate model of "patient autonomy" in which doctors present the data and patients make the decisions. Though it is true that doctors can't tell prostate-cancer patients whether or not to have surgery, it is also true that patients can't figure it out on their own.

Good decisions require both medical expertise and an understanding of the patient's unique life circumstances. They require shared decision-making. But for that sort of doctor-patient conversation, doctors have to be good listeners who are able to take the perspective of their patients. Moreover, medicine in the developed world has increasingly become a matter of managing chronic disease rather than curing acute disease. But the management of chronic disease (diabetes, hypertension, cardiac insufficiency, musculoskeletal pain) often makes difficult demands on patients to change how they live. A list of lifestyle changes is of little use. Most people know what to do. The problem is how to motivate them to do it. It takes empathetic, perspective-taking medical providers to get patients to work as partners in managing their diseases.

Similarly in law, knowledge of the law may be the key to effective advocacy, but by itself, it will not tell lawyers what they have to know about clients who need to be counseled. A good lawyer needs to know the client as well as the law.

And in education, good teachers eschew one-size-fits-all lesson plans and opt, instead, to reach each student where she is. But if the teacher can't gain insight into the thoughts and aspirations of each student, the one-size-fits-all lesson plan is the best he can do.

Wisdom. Finally, students need what Aristotle called practical wisdom. Any of the intellectual virtues I've mentioned can be carried to an extreme. Wisdom is what enables us to find the balance (Aristotle called it the "mean") between timidity and recklessness, carelessness and obsessiveness, flightiness and stubbornness, speaking up and listening up, trust and skepticism, empathy and detachment. Wisdom is also what enables us to make difficult decisions when intellectual virtues conflict. Being empathetic, fair, and open-minded often rubs up against fidelity to the truth. Practical wisdom is the master virtue.

My argument for wisdom as the manager of the other intellectual virtues has a parallel in the writings of Thomas Kuhn, whose *The Structure of Scientific Revolutions* (1962) changed the way people think about science. Indeed, it changed the way some people think about almost everything. Kuhn's point was that scientific progress could not be understood as a logical, rule-governed advance in understanding that accumulates brick by brick, fact by fact. There have been periods in which science seemed to move in one direction, but also periods of upheaval, when everything changed. Few such "revolutionary" periods were produced by a key new fact. So the lesson that many nonscientists drew from Kuhn was that truth is arbitrary, and that scientific change is as much about intellectual fashion as about progress. Kuhn was appalled by this conclusion and tried to make clear that just because scientific advance was not governed by rules did not mean that it was

arbitrary. Scientists, he argued, adhere to what he called "epistemic values" — simplicity, accuracy, comprehensiveness, fruitfulness — that make some theories better than others. Values are not rules, so scientists can disagree about how important each value is and how well a given explanation exemplifies each value. But scientists do tend to converge on allegiances to certain theories for good, non-arbitrary reasons. This convergence reflects the collective wisdom of science. My list of intellectual virtues plays the same role in understanding good thinking that epistemic values play in understanding good science.

In my view, the way to defend the value of college is to defend the importance of intellectual virtues and then show that the education that colleges provide is successful at cultivating those virtues. Cultivation of intellectual virtues is not in conflict with training in specific occupations. On the contrary, intellectual virtues will help to create a work force that is flexible, able to admit to and learn from mistakes, and open to change. People with intellectual virtues will be persistent, ask for help when they need it, provide help when others need it, and not settle for expedient but inaccurate solutions to tough problems. In the Stanford business professor Jeffrey Pfeffer's important book *The Human Equation* (Harvard Business School Press, 1998), he argues that the right way to hire is to focus on the skills you don't know how to train, and trust that you can teach the skills you do know how to train. Workplaces need people who have intellectual virtues, but workplaces are not in a good position to instill them. Colleges and universities should be doing this training for them.

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Are they? Few colleges and universities think systematically about

how to encourage intellectual virtues. Mostly their cultivation is left to chance, not to institutional design. Aristotle argued that virtues are developed through practice, and by watching those who have mastered the relevant virtues. Professors have to model intellectual virtue in their everyday behavior. The questions we ask in class teach students how to ask questions. How we pursue dialogue models reflectiveness. Students watch who we call on, or don't, and learn about fairness. We teach them when and how to interrupt by when and how we interrupt. We teach them how to listen by how carefully we listen. If they see us admitting that we don't know something, we encourage intellectual honesty as well as humility. We are always modeling. And the students are always watching. We need to do it better. A good start is to do it deliberately and not by accident.

Most professors do not have the luxury of teaching small classes and seminars, as I do, and it is hard to model intellectual virtues when one is lecturing to 300 students. Nor do I envision a time when small classes will be commonplace at large institutions. Nonetheless, I think there are practices that can enhance the cultivation of virtue, even if they are imperfect substitutes for teacher-student dialogue.

In *Poetic Justice* (Beacon Press, 1995), the philosopher Martha Nussbaum makes the point, in discussing virtue more generally, that narrative fiction is a good tool for displaying people living virtuous or not so virtuous lives in a way that provides vividness and specificity that didactic classroom instruction lacks. Providing students with narratives (they needn't be fictitious) of people displaying intellectual virtues may be a good way to make the best of student-faculty ratios that are inhospitable to having professors model these virtues for their students.

For the most part, students come to Swarthmore, where I have been teaching for almost 45 years, wanting and expecting that their education will be broad and their interactions with

faculty significant. But now, even here, this model of liberal-arts education is being challenged, as students come hellbent on learning *something* that will make them employable (it seems as though every student at Swarthmore has at least a minor in computer science). Liberal-arts education is a precious jewel, and we must do a more serious job of defending it.

It was an axiom of the social and political upheavals of the 1960s and 1970s that "you can't take down the master's house with the master's tools." What this means in the context of higher education is that you can't discover the deep limitations of economics by studying only economics. You can't uncover the deep limitations of genetics or evolutionary biology by studying only genetics and evolutionary biology. To see the limitations of a discipline — any discipline — requires a perspective developed at least partly outside that discipline. General education is not a substitute for disciplinary expertise. What it is, however, is an essential ingredient to keep disciplines from running around in circles and swallowing their own tails. General education enriches the specialized training in the disciplines.

The challenges to colleges and universities are coming from all sides. The White House wants to make sure that future earnings justify current costs. Parents faced with six-figure tuition bills join the chorus, as do students faced with backbreaking debt. As if more pressure were needed, employers want to hire people who can do the job "right out of the box." They want "plug-and-play" employees.

I am not sure that even institutions inclined to resist this pressure will be able to. To do so, colleges must articulate their unique value in real detail, and in a way that makes clear that students who have training in the liberal arts will be not only better people and better citizens but also better professionals and employees. The right way for colleges and universities to defend themselves is by describing themselves as nurturers of intellectual virtues and

then devoting themselves to that task.

David Brooks, in his new book, *The Road to Character* (Random House), distinguishes between what he calls "résumé virtues" and "eulogy virtues." The former are the skills that get you good grades, good jobs, nice houses, and hefty bank accounts. The latter are what make you a good person. Though I think the distinction between skills and virtues is an important one, Brooks is wrong to imply that résumé virtues are all that we need to produce excellence at work, or that eulogy virtues are for what comes after one's work has ceased. Eulogy virtues are just as important to becoming good doctors, good lawyers, good teachers, good nurses, good physical therapists, and even good bankers as are résumé virtues. And they are also important to becoming good children, parents, spouses, friends, and citizens. As Aristotle knew, virtue is needed for material success just as it is needed for moral success.

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11259960 · 2 months ago

Always been self-evident? No. Have a look at the history of history education before writing throw-away lines that simply aren't true. A set of mixed personality traits is not the same as "knowing how to think." As a professor of the humanities, I am embarrassed that we so seldom advance a cogent AND knowing case for ourselves or anything. resembling HIGHER education. The problem is only in part, to use this writer's word, "philistinism."

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11259960 · 2 months ago

that should be "history of higher education"

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nowak · 2 months ago

WOW! What a lecture!

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