

Plato's Educational Foundations and the Future of College Teaching

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Introduction

Given the degree of change higher education is experiencing today, some academic forecasters predict colleges and universities of the future will bear little resemblance to the physical and conceptual structures currently in place.¹ While these changes may not yield the erasure of the traditional classroom lecture, at least not those classrooms of “superstar faculty,”² current trends and the suasiveness of neo-liberal calls for educational reform signal the early stages of a revolution that will alter the shape of our learning institutions and challenge time-tested educational foundations. The implications of these developments are not merely the further proliferation of online teaching and massive open online courses (MOOCs), or the use of software like Google maps to teach literature and Skype or Periscope to connect the classroom with experts and students from around the globe. Rather, we are heading toward a radical change to the way education is packaged and experienced, therefore reconceiving the way the university has been structured for nearly a thousand years.

The beginnings of this higher education transformation are already trickling down into the redesign of our courses: technology is redefining the nature of the classroom and creating new tools for delivering content and generating learning experiences; *scientific* assessments of teaching are measuring our progress toward reaching new learning outcomes; economic incentives are driving increased class sizes and eliminating under-enrolled courses; external constituents and forces beyond the control of the instructor—businesses that hire our students, government agencies which offer them funding, and private and public partners who increasingly support our research and teaching activities—are influencing our teaching agendas;³ and competency-based education is in many places replacing the abstract model of learning typical of the 14-week semester. Pressure to adapt to these changes penetrates all levels of the academy, and all faculty are experiencing at least one, if not more, of these disruptions to traditional classroom practices.

Whereas some faculty embrace these changes and adapt courses accordingly, recent studies suggest a majority of faculty are resisting them out of either trepidation or sincere skepticism.⁴ Naturally, faculty are often discouraged and their sense of optimism extinguished when it appears forces beyond their control are mitigating their authority over curriculum. Rarely do faculty have any input into the development or use of quantitative assessments that measure their teaching effectiveness, and they reasonably reject attempts by private donors and public legislatures who want to dictate academic agendas.⁵ Troublingly, as a result of recent academic reforms, faculty have seen important areas of study (e.g. Classical Studies) eliminated when programs fail to meet new enrollment quotas. Equally disconcerting is when faculty are cajoled into contemporizing esoteric research so it appears more relevant to students and funding agencies.⁶ Most alarming is when students and their parents encourage faculty to teach more to a career than to produce well-rounded human beings.⁷ Certainly, these experiences are jarring to traditional academic sensibilities, so it is understandable many faculty may initially be resistant to or skeptical of new approaches to teaching and learning, especially when they are perceived as driven by the sorts of academic reforms I have noted.

Unfortunately, negative consequences associated with these academic reforms often outweigh and overshadow the benefits that can emerge from the curricular redesigns change engenders. While several recent studies identify major changes occurring in higher education and the mainly negative perception faculty have of these changes,⁸ few take a qualitative and philosophical approach to gauging how these changes may provide opportunities for curricular innovation that allow faculty better to achieve educational goals. To be able to make informed decisions regarding new approaches to teaching, faculty need to be able to assess benefits and deficits with clear standards for assessment. In this paper I respond to the call to establish such standards by arguing for establishment of a Platonic benchmark for measuring the merits of new developments in teaching on the basis of an approach's ability to constitute personalized, interactive, and holistic learning experiences.⁹ For over 2,000 years, three criteria inherited from Plato's philosophy of education have served as guiding principles in teaching. I suggest these principles remain relevant as a benchmark for evaluating new pedagogical approaches and tools and identifying those most likely to enhance faculty's mission. Under the belief productive transformations will occur only if we retain a clear vision for our true mission, I rely upon Plato's time-tested educational foundations to elucidate some of the ways college teaching is being transformed by innovations in science, economics, and technology—

three areas recent reports indicate are most likely to affect the future of higher education.¹⁰

In advancing my claim, I use the first part of this essay to summarize Plato's philosophy of education and identify the pedagogical principles embedded within it. In the next three sections I use these Platonic principles to uncover the merits of recent pedagogical reforms stemming from innovations in science, economics, and technology respectively. Lastly, I conclude by suggesting Plato's model for personalized, interactive, and holistic learning experiences provides a clear and easy-to-use framework for either exploiting or rejecting academic reforms on the basis of their ability best to meet our mission as educators.

Why Plato's Philosophy?

For over 2,000 years, Plato's dialogues and Socrates' questions have informed instructional practice inside and outside the classroom. Plato teaches us education should promote critical thinking, and the ideal context for this to occur is through the present, give-and-take, intellectual exchange of ideas characteristic of the philosophical method he names dialectic. In many ways, rhetoric, the art of persuasion, so heavily popularized in ancient Greek democracy, is opposed to dialectic in that it caters to the masses and seeks as its end persuasion rather than intellectual enlightenment. Rhetoric, according to Plato, exists in the world of beliefs and opinions and cares little about the nature of Truth or the true souls of its interlocutors. Philosophy, on the other hand, leads souls toward intellectual enlightenment and fulfillment, and dialectic is a personalized vehicle through which teacher and pupil engage in a unique, interactive, and holistic educational journey. With a philosopher as his guide, a student may discover through a Socratic method of questioning that Truth is within him waiting to be elicited; knowledge is not conveyed but rather revealed.

The art of writing, however, the emerging technology of Plato's day, called the nature of education into question as the technology became widespread and the Sophists introduced it for instructional purposes. In dialogues like *Sophist*, *Gorgias*, and *Phaedrus*, Plato mocks the rhetorical and speech-writing practices of the Sophists as imitative, representational, uninformed, insincere, and existing in the world of appearances and beliefs, rather than in the realm of authenticity and truth. Plato says in *Phaedrus* through the famous myth of Thamus and Theuth writing does not produce knowledge but rather fosters forgetfulness in the minds of users as they begin to rely on external aids to memory rather than on their own mental agility and memory. One of writing's greatest faults is it is an impersonal form of communication, directed to no one person in particular, capable of being distributed

broadly, and, once written, its writer cannot discriminate among its readers. Furthermore, as written texts become disconnected from their authors in time and space, they stand indefensible when questioned. Plato refers to such written discourse as disembodied and dead *logoi* (words/arguments). As Socrates explains in *Phaedrus*:

Writing, Phaedrus, has this strange quality, and is very much like painting; for the creatures of painting stand like living beings, but if one asks them a question, they preserve a solemn silence. And so it is with written words; you might think they spoke as if they had intelligence, but if you question them wishing to know about their sayings, they always say only one and the same thing. And every word, when once it is written, is bandied about, alike among those who understand and those who have no interest in it, and it knows not to whom to speak or not to speak; when ill-treated or unjustly reviled it always needs its father to help it; for it has no power to protect or help itself.¹¹

On the basis of this critique of writing, why does Plato write dialogues when writing is in clear violation of his philosophy of education and its emphasis on the interactive, dialectical pursuit of truth? Despite Plato's critique of writing, one must conclude, on the basis of the quantity of texts he leaves behind, Plato discovers a way to exploit the benefits of writing, to circumvent its limitations, along with his own critique of it, while remaining committed to his pedagogical principles. Indeed, the dialogue form is key to unlocking the philosophy behind Plato's use of writing to produce personalized, interactive, and holistic learning experiences. As argued previously,¹² Plato's dialogues promote critical inquiry and moral investigation by engaging readers in an open-ended process of philosophical inquiry. Although the dialogues are representational in their depiction of oral discourse, they neither contain nor impart philosophical principles. Rather, philosophical principles emerge in a specific reader as he or she engages in critical thinking about the dialogue and with others who might also be struggling to discover the nature of the discussions and the interlocutors depicted in them. As such, Plato finds a way to generate an interactive and philosophical relationship between these texts and their readers.

Effectively, Plato's written conception of philosophy does not lie in the mere representation of dialogical exchanges between philosopher and interlocutor, but rather on the dramatic effects these exchanges may have on readers, thus provoking them into a philosophical experience. In this way, the text transforms from a mere technology of representation to a tool for promoting interactive and personalized learning. Whereas Plato deplores the representational nature of

writing—we can assume he would feel similarly about more contemporary technologies, too—he insists technology can be more than a tool for copying and conveying knowledge.

Thus, Plato offers, through his critique of writing and the example he sets for the more effective use of it, core principles that have served ever since as a guide to teaching. Faculty must not think of education as the delivery of content to students. Instead, the *techné* (science/art) of teaching rests on generating personalized and interactive relationships with students that encourage learning to become a holistic process. While initially Plato is skeptical writing can produce such experiences, he discovers a way of ensuring it can, and leaves behind a corpus of texts that continues to influence readers generations later. Drawing on principles inherited from Plato, in the next three sections of this essay I show how Plato's philosophy of education can be applied in the assessment and anticipated adoption of new pedagogical practices emerging from scientific, economic, and technological advancements.

The Science of Teaching

In the same way Plato contends with new academic technologies that threaten to jeopardize his educational principles, we are facing no-less-revolutionary forces from science that inevitably will transform college teaching. Even though teaching is arguably more art than science, today researchers are discovering ways science can make teachers better artists in the classroom. For example, James Zull and more recent educational neuroscientists working in programs like the Neuro Education Initiative at Johns Hopkins University are exploring the intersection of cognitive neuroscience, educational psychology, educational technology, and education theory in an attempt to understand the biology of learning.¹³ On the basis of their data, they are uncovering how the brain acquires, synthesizes, records, and retrieves information, and how assignments and assessments can be developed in ways that capitalize on research findings. As educational neuroscience continues to advance, and as researchers learn more about the biology of learning, the art of teaching, including fundamental practices like engaging students with probing questions, moving them from lower- to higher-order levels of thinking, may ultimately become more precise.

The science of teaching extends, too, to innovations in computer science, particularly in the growth of educational gaming. Computer programs can now be coded to adapt to user input and feedback, so educational games can observe neuroeducational principles by targeting neuronal networks in the brain in an attempt to build new synapses that connect to them. Already commodified by companies like Lumosity, the self-proclaimed “human cognition project,” their website offers personalized brain training through games that promise to use neuroscience to improve memory, attention, speed, flexibility, and

problem-solving abilities.¹⁴ Lumosity is far from original, though, in using games for teaching purposes. In fact, at least since the Roman Empire, armed forces have used games to prepare recruits for the realities of battle.¹⁵ Some even argue military gaming is over 5,000 years old as military models using colored stones and grids on a board have evolved into cutting-edge computer applications that offer virtual, yet realistic, warfare experiences.¹⁶ However, Emma Blakey, a researcher in developmental psychology at the U.K.'s University of Sheffield, in a recent *Scientific American* article cautions very few studies actually examine the efficacy of games to improve academic performance.¹⁷

If the science of gaming represents the next frontier in teaching, then we must make certain its level of verisimilitude makes gaming a viable tool for engaging students on a personal level and getting them to interact in ways that draw on and develop a variety of senses. In her recent book, Sara de Freitas explores how technologies like online gaming transform relationships between teacher and student, learning and knowledge, classroom and community.¹⁸ Computer-generated games invite users into virtual worlds where wars are won or lost, businesses are bought or sold, and morals are maintained or misplaced. These games prove good training grounds for any situation students encounter in the world outside the classroom, and every subject, from Spanish language to political science can be taught through them. Should entire courses be offered and taught through a video game, or should they be relegated to homework assignments and ancillary course materials?—the verdict is still out, but the practices are already in place. I posit in the face of their inevitability, Plato's philosophy of education can help us to design and incorporate gaming technologies in effective ways.

Like the readers of Plato's dialogues, the players of educational games similarly can be positioned as subjects at the center of an intellectual journey. While Emma Blakey insists more evidence is needed to measure the effectiveness of video games as educational tools,¹⁹ Plato gives us qualitative measures through which we can assess their contributions to teaching. Specifically, video games do raise many questions and concerns from the point of view of a Platonic benchmark. On the one hand, in what capacity can a mentor participate in guiding students through virtual spaces? Even when Plato's dialogues are read in isolation, the morally superior and intellectually dominant characters rise to the fore, emerging from the pages to offer sound counsel to readers. In what ways might educational games be developed similarly to guide players through virtual spaces? On the other hand, the hope is that educational games—like Plato's dialogue—can engage players on a variety of levels, from the emotional to the intellectual, so the potential for personalizing virtual experiences and creating interactive and

engaging learning environments comes close to Plato's ideal of holistic education. Let college faculty remain optimistic and open-minded about the potential of video games to reach students through a dimension and medium not afforded by traditional classroom practices. Whether they may be good supplements to, if not replacements for, more traditional instructional practices, will depend on their ability to make learning an holistic and active, rather than atomistic and passive, process.

The Business of Teaching

At the same time the science of teaching is being commodified, with large amounts of money invested into developing educational games, the business of teaching is also influencing college classes, as public grants, corporate sponsors, and private donors fund and influence many curricular initiatives. Blame it on a lack of commitment to higher education by taxpayers, or the catastrophic reductions in state appropriations to higher education levied on public colleges and universities by state legislatures, but many academic institutions are becoming self-sufficient businesses, relying largely or solely on tuition dollars and external funding to stay afloat. Accordingly, teaching institutions are acting more like corporations than non-profit institutions: hiring data analysts, business managers, fundraisers, and superstar faculty who can attract tuition dollars and large grants to replenish academic coffers.

As colleges adopt corporate practices, business interests drive many of the curricular changes. Stripling and Mueller report that, "Fifty-three percent of trustees at private colleges and forty-one percent of those at public colleges are employed in business, according to the most recent analysis by the Association of Governing Boards of Universities and Colleges."²⁰ More than pumping dollars into colleges (as important as that may be), business leaders offer a brand of strategic guidance foreign to most academic enterprises. So while there may be no conspiracy here, only real pragmatics, the group University Watch is drawing attention to serious concerns regarding corporate influences on public research agendas.²¹ As they argue, if colleges become beholden to funding from sources that have their own agendas to advance, then they risk being made to teach and research about topics that align more with the interests of sponsors than with the needs of students or even the greater good.²²

Although higher education may be slower than the private sector to adapt to market trends, as universities begin to adopt a corporate model, they are engaging in business practices historically uncharacteristic for higher education institutions. A prime example, Andy Thomason reports, the State of Georgia is consolidating its programs and campuses to become leaner, more efficient, and cost effective.²³ If Georgia's recent

news is any indication of the economic climate in higher education, faculty should expect more corporate behavior from colleges in future, including mergers, acquisitions, and even bankruptcies. The competitive nature of today's educational marketplace means colleges and universities have strong incentives to balance their budgets, reduce and streamline expenses, and strategically expand on revenue-generating programs, online certificates, professional master's degrees, and skill- and competency-based training. Interestingly, the traditional four-year degree is not the most profitable or economically feasible product to deliver, unless it can be redesigned to decrease staffing of face-to-face classes, increase use of professional placements and experiential learning opportunities, and develop some, if not all, curriculum online.

But perhaps the traditional, four-year degree is not the most effective means to achieve an education? Certainly, there is reasonable fear among the public that the price tag for four-year degrees will continue to balloon out of control, making physical access to faculty and classrooms more of a premium experience for the wealthy few than a universal right for the many. One benefit to the future model of higher education is that it will support a heterogeneous mix of educational providers who will confer certificates of competency and skill-based trainings drastically different and less expensive than the traditional degrees granted at December and May graduations. As such, the evolution of the business model in teaching may increase access to education for those to whom it historically has been unattainable. In the same way Plato's dialogues reach an audience far greater than he could amass through one-on-one dialectical exchanges, so too can colleges expand the reach of higher education's mission to educate more students than could ever be taught before.

The business model of education also highlights the need for internships specifically and experiential learning generally.²⁴ To the extent experiential learning casts students into real-world scenarios that require them to develop and use a variety of skills, they satisfy the Platonic emphasis on a holistic education. Moreover, these experiences often are guided by a mentor who establishes a learning relationship with a student by interacting and engaging with him or her over the course of an extended project. From the business student who interns at IBM, to the Communication Studies student who works on a social media campaign for Planned Parenthood, these experiences are crucial components to contemporary academic programs, and they offer great value not just in career preparedness, but also in fostering critical-thinking skills. The closer the connections become between universities and corporations, the more opportunities are likely to become available for students to practice and test skills they develop inside and outside the classroom.

The Technologies of Teaching

This corporate approach to higher education is part of the reason the marketplace for academic technologies is currently booming. A plethora of companies are vying to develop instructional media that offer either to enhance or replace traditional learning experiences. As the last frontier for the IT industry, Silicon Valley is turning its attention to the educational arena, resulting in venture and equity financing for education technology companies rising to \$1.87 billion in 2014, representing a 55% increase from the year before.²⁵

In spite of the plethora of educational technologies and distance learning programs, faculty should not expect our current classrooms to go away anytime soon. In fact, online programs, courses, and schools have abominably low matriculation rates, and for the past few years, enrollment at online universities has followed a downward trend. For instance, University of Phoenix experienced a devastatingly large drop in enrollment in 2013,²⁶ and in June of 2014 *The Wall Street Journal* reported new enrollments continued to plunge another 13% from the year before to total 241,900 from a high just a few years before of 400,000. Consequently, plans are in place for the University of Phoenix to eliminate more jobs and close many of its facilities.²⁷ While distance learning is appealing, particularly to non-traditional students for whom it offers the flexibility many of them need, evidence suggests students do better in courses where they experience human contact with an instructor.²⁸ In fact, even in online classes, studies indicate students prefer to use traditional, printed books over modern, digital texts.²⁹ College students are not as digitally native or as comfortable in purely online environments as we often think they are—at least not when it comes to education.

All signs are pointing in the direction of a “brick-and-click” model for higher education, a hybrid structure where face-to-face and online instruction are blended together into the curriculum.³⁰ As Singer and Bonvillian suggest, “If all goes well, the nation will embrace a system in which online education does what it is good at (providing content and information, enhancing data visualization, and improving critical assessment), and face-to-face education does what it is good at (fostering discourse and argumentation, mentoring, training students for research, and making conceptual leaps).”³¹ As the new hybrid structure becomes widespread, brick-and-mortar colleges try to catch up to online universities, offering distance learning options, while purely online schools move in the opposite direction, buying up physical space and creating regional sites for instruction and advising. The taboo associated with online universities may also slowly be disappearing, especially as for-profit universities sap the talent pool of the traditional academy. Coursera, for example, recently hired a former Yale president as its chief

executive, and the University of Phoenix did similarly by hiring University of Michigan's CFO to become its next president.³²

Is the former president of Yale a sellout, or does he sincerely believe in the power of technology to transform the educational system? The guess is that he understands, as did Plato, technology itself is neither the enemy nor the solution; technology is not inherently bad, but technology used poorly and in the wrong hands—e.g., the speeches of the Sophists—poses obstacles to the establishment of truth and the nurturing of holistic learning experiences. Let this be a call to action for faculty to become digitally fluent so those tools at our disposal may be utilized in the most effective ways possible to deepen the learning experience for our students and to engage them in ways traditional classroom practices may fall short. Faculty also must contend with ethical issues that arise from the use of technology, like the fair use of content online, and the ethics of using third-party educational apps that mine student data for research and marketing purposes. Many questions remain. Can students be required to post to publicly accessible social media sites for class? Who can record and post lectures? Who owns the content our students produce? Becoming digitally fluent will allow faculty to answer these questions as they arise and engage students with tools we hope will further our goal of creating personalized, interactive, and holistic learning experiences.

Looking Toward the Future

Before uncritically embracing or rejecting new developments in teaching, I encourage the use of a Platonic benchmark for evaluating pedagogical possibilities that emerge from innovations in science, economics, and technology. While change can be frightening, if faculty approach change with open, inquisitive, yet critical, minds, and a standard through which to evaluate the merits of such changes, then these developments may offer opportunities for faculty to do better at what we think we already do best. Specifically, as I argue here, neuroscientific research and the science of teaching may help faculty become more precise in their practices, allowing personalization of instructional methods to engage students and their particular learning styles. Likewise, the corporate university system raises many questions and concerns, but it also supports greater access to higher education, providing alternative platforms for learning that are more affordable to many more students than the traditional model yielding a 4-year degree. Lastly, as I show, technology is not the enemy of pedagogical practices, but rather the ineffective use of technology and the lack of digital fluency among college professors is the real problem, coupled with issues of fair use and the mining of student data through third-party educational apps and technologies.

As we confront change in higher education, Plato can continue to inform our educational practices, as his principles for teaching endure as standards for judging the efficacy of our teaching approaches and tools. Plato also reminds faculty we must never lose sight of the human element in teaching, neither in online nor face-to-face formats. The bottom line is universities are not just portals students use to access knowledge; they are places where students begin to develop as social beings, where they learn and live with others, where good teachers, mentors, and advisors model the kind of learning behavior they would like to replicate in their students. Our institutions of higher education should always be places where passion gets transmitted, where desires for lifelong learning are inculcated, where students become self-educable human beings. All the practices of institutions of higher education should be productive and supportive of these ends. As faculty navigate new and shiny terrain in higher education, we can do so with the comfort of knowing Plato provides us with a lasting, guiding framework for remaining committed to time-tested educational foundations while exploring the potential of new modes of learning. Productive transformations will occur when they are evaluated on the basis of our core mission as educators.

Endnotes

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