I Flipped My Classroom: One Teacher's Quest to Remain Relevant

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ABSTRACT
This is one teacher's personal chronicle of his quest to remain relevant as technology dramatically revolutionizes the higher education environment. The enlightening narrative of how he "flipped his classroom" traces the evolution of his pedagogic conclusions, details specific and successful implementation strategies, and documents the results of the new model, which achieved significant improvements in student engagement and mastery. Both academically rigorous and entertainingly instructive, his account makes a compelling case for institutional change—one classroom at a time. It is must reading for any teacher open to exploring new instructional methods that successfully blend the best of both traditional and online worlds by introducing learning flexibility while retaining and improving the efficacy of direct instructional contact.

KEYWORDS
flipped classroom, online learning, education reform, teaching methods

My epiphany was triggered by a student who insisted on doing the daily crossword during my lectures.

One bright, passively aggressive heckler blatantly signaled she was less than raptly captivated by my standup routine. She made it obvious my lecture was a waste of her time. It took me some time to acknowledge the validity of her implied criticism, but I reluctantly concluded she was right. She was absolutely right.

I began to observe the other students. On my great days, I was reaching maybe one third, at best. On my average days, I deluded myself into believing that the handful of front-row students who dutifully responded to my Socratic interplay were actually representative of the remainder. It was time to take stock.

Lulled into a comfortable complacency by reliably positive student evaluations, I realized I would be hard pressed to identify much advancement in my teaching methods over the previous four decades. That sobering revelation brought to mind the first of my three alma maters. We cadets at the progressive Air Force Academy always described rival West Point as a venerable institution steeped in 200 years of tradition…unhampered by progress.

As technology was dramatically revolutionizing the world, I was slipping into irrelevancy; stuck in time using the rotary dial party line of my childhood. Ironically, I once ran Minnesota's original and largest Internet company, but my educational technology advances were pretty much limited to fancier slides.

I was determined to remain relevant—if only in my own classroom.

OUR TECHNOLOGY CHALLENGE… AND OPPORTUNITY

Many visionaries have introduced new educational technologies over the years, and like many of my colleagues, I had been content to make just minor changes at the margins of my comfort zone. But that was then, and this is now.

Market forces are rapidly transforming our educational environment, with or without our concurrence, or even our acknowledgement. The migration of course content to online platforms is reaching a critical mass that will sweep the once evolutionary nature of this inevitable transition into an outright revolution.

Online platforms are far more convenient and affordable for the students we serve, and more significantly, they are now beginning to offer the best content in a profession where content is king. With Harvard, MIT, and Stanford professors leading the way with their rapidly evolving Coursera and edX course delivery platforms, other instructors and institutions are scrambling to catch up and remain relevant, if not competitive—an unspoken anathema among educators.

Some institutions will take such timid steps they will slip even further behind the increasingly steep innovation curve, and the revolution will soon pass them by. Others will resort to the bureaucratic absurdity of refusing to officially recognize the value of courses taught by and accepted by the premier schools of our country. However, student and faculty demand will eventually obviate that cartel-like mentality, and much sooner than we think.

In a related exogenous shock, the U.S. Department of Education has now indicated that financial aid may be awarded based on students' mastery of "competencies," rather than simply their accumulation of ubiquitous credits. This seemingly minor bureaucratic sidebar has huge import, because it opens the door for innovative colleges to decouple programs from credit hours by creating new education models that do not revolve around the amount of time students spend in class.

Proponents contend that certified competencies more accurately meet the interests of prospective employers than does total seat-time in a classroom. The debate resurrected an experience I had decades earlier when enrolling in an MBA program. The degree requirements included an introductory course in statistical analysis. I had already earned a master's degree in Econometrics, so this seemed a waste of time, both mine and the professor's. I proposed taking a more advanced course in place of the basic requirement, and even offered to take a proficiency exam. The department left the decision up to the professor, and he refused. I had to take his elementary level course, which not so coincidentally required that I purchase his overpriced book. Fortunately, technology-based educational innovations are rapidly undermining that kind of monopolistic arrogance.

Ongoing evolution is essential in any profession, but the historic pace of our adaptability in education brings to mind a tweed-jacketed dinosaur staring blankly at the descending glacial ice sheets. Inaction is no longer an option. Both our institutions and we individual educators are facing the academic equivalent of the most fundamental of Darwinian principles: adapt or perish.

MY QUEST FOR RELEVANCY

As I mulled over these troubling realities, it occurred to me that any value I might add as an experienced practitioner did not emanate from my weekly lectures. How is hearing a scripted lecture any different than reading a book?

Rather, *my true value to students comes from interactive personal mentoring*—something our traditional lecture-based teaching model does not easily facilitate, and more often than not, actually hinders. That was the first of three revelations I had during my post-60's vision quest.

Research covering a wide range of disciplines consistently demonstrates that the most effective

teaching methodology uses a combination of active learning and interactive engagement between the instructor and students; and also among students and their peers.

That led to the second of my revelations: *the most meaningful instruction imitates the real world.* Our long established lecture-based, exam-based model does not encourage student-to-student peer learning, and that is antithetical to the society we are purportedly readying our young charges to enter.

In the working world, we collaborate with colleagues; we don't sit in lecture halls and focus our individual energies on pleasing one professor. Success is defined by our ability to work with others to resolve common challenges by drawing on all available resources, not by independently solving exam questions from rote memory.

These pedagogic dilemmas were compounded by my perspective as an economist. As my class grew in popularity, the productivity of my traditional service delivery model was inversely and exponentially inefficient. I had already capped enrollment at 45 students, which was double the more manageable level from a few years previous. I was determined to avoid the typical larger lecture-hall response to growing demand, since that would only further diminish service quality.

That goal led to my third revelation: my traditional education delivery model could not remain a function of simply adding more chairs and TA's to accommodate growing demand. *A more effective and efficient learning model would require wholesale structural change.*

My routine was in dire need of retooling, and that meant not simply hanging new fenders on last year's model, as Detroit did for years while foreign carmakers reinvented the industry. If I clung to my increasingly antiquated lecture-based pedagogies, I faced the clear and present danger of slipping into irrelevancy as the brave new world of technology passed me by.

NEW WAYS OF DOING BUSINESS

To remain relevant in today's teaching environment, it was clear I needed to reform, reinvent, redesign, restructure, and retool myself. No "re" left unturned. And that rebirth could not amount to cosmetic surgery; it was going to require a full heart and brain transplant.

To educate myself about alternative education delivery methods, I turned to that endless repository of online snippets so readily served up by Google and YouTube. Always the DIY practitioner, I was far more interested in pragmatic examples on which to base my new model than in dated scholarly tomes stating the obvious in far too many words—and inevitably recommending more study.

Not surprisingly, evidence continues to accumulate suggesting that neither traditional lecture-based teaching methods nor courses taken individually and exclusively online are the most effective means of instruction. Both extremes fall short, because they fail to account for the learning preferences of individual students, and more fundamentally, because neither has much semblance to learning and functioning in real life.

My conclusion: *Online platforms are most successfully integrated when lecture material is conveyed outside the classroom in an interactive and engaging format, and class time is reserved for active learning exercises.*

Further, the most effective programs recognize the relationship that time plays in achieving competency. As in the real world, people learn at different paces, so the most successful learning models incorporate that flexibility.

When I shared these initial thoughts with my then current class, they readily reinforced my theses. As entertaining as my weekly time-specific and place-specific lectures might be, even when liberally interspersed with real-world anecdotes, they had little applicability for the future lives of my students.

Nor did the theoretical and practical knowledge necessary for a fulfilling life and prosperous

professional career have much to do with individual rote mastery. The name of the teaching game is experiential learning, and it is a team sport. Just like in the real world.

My students observed that the baby steps being taken by those instructors who had ventured outside their lecture halls were not always integrating the promise of new technologies all that effectively. Fancier slides. The students widely panned the hour-long videotaped lectures as even less engaging than those delivered in person. They pointedly noted the incongruity of using state-of-technology Active Learning Classrooms (ALCs) as simply less convenient seating for traditional lectures.

And so, this is what I came up with: *a technology-facilitated, flexible learning model to equip students with the hands-on participatory tools they need to compete in the new economy*. In short, instruction imitating real life.

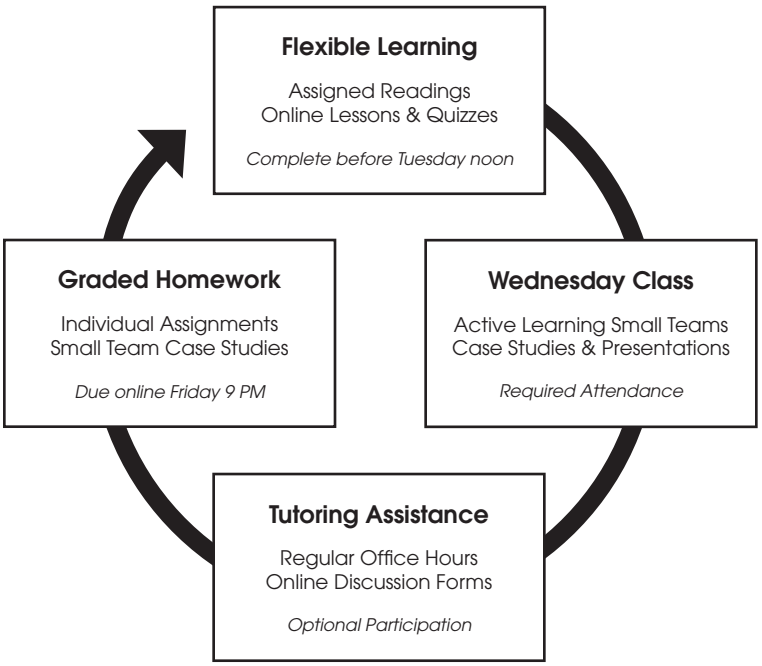
That's the academic version. Figure 1 provides the practical translation and illustration of my new pedagogic strategy: a *flipped classroom* to provide each student with the flexible learning option of short, convenient, online tutorials, coupled with technology-enhanced active learning sessions that subsequently reinforce these conceptual lessons through small team, tutor-supported, problem-solving exercises.

MAIDEN VOYAGE FOR MY FLIPPED CLASSROOM

I launched my flipped classroom in the Fall 2013 term of my class in nonprofit and public financial management, an introductory undergraduate course at the University of Minnesota designed to equip future managers with the practical financial planning, budgeting, and analytical techniques they need to be successful in their careers.

I decided to go cold turkey with my transition from a traditional model to a flipped classroom.

FIGURE 1.
Flipped Classroom Weekly Cycle



In for a penny, in for a pound. Figure 1 shows how I translated the theory into the reality via an iterative process, which included various midcourse corrections in response to ongoing suggestions from my very tolerant test subjects:

Video Lessons

Students have online access to a series of *short video lessons* that may be completed at their convenience. My semester-long course is divided into 10 weekly topics, consisting of assigned readings plus three or four video lessons that average about eight or nine minutes each, which students think an appropriate length. The lessons are not taped lectures, but rather include multimedia content designed to acquaint students with specific *kernels of information*. The videos remain permanently accessible on YouTube, and a Tuesday noon deadline to earn participation points insures completion before the Wednesday in-class exercises.

As the first half of my "flipped classroom," these lessons are extremely popular with students, particularly for the flexibility to complete assignments when most convenient, to pause the videos and take notes as needed, rewind and rewatch portions if unclear on the concept, and to later access portions of the lessons for homework and exam reviews. Those students already familiar with specific topics appreciate the option to work ahead without being required to sit through unnecessary lectures.

Online Quizzes

Each of the three or four weekly video lessons concludes with a *short online quiz*, consisting of two to four questions designed to record student participation and gauge comprehension. Students must answer all the questions correctly before moving on to the next video—they are sequentially staged—and may answer the questions as many times as it takes. The object of the quizzes is to demonstrate progressive mastery through immediate feedback, not grading.

Ideally, more challenging, open-ended questions and spreadsheet calculations would allow students to more fully demonstrate incremental mastery, but the U of MN's online Moodle Learning Management System (LMS) cannot accommodate such questions in a progressive, auto-graded format.

Active Learning Sessions

Class time is dedicated to *active learning sessions*, which allow direct interaction with the instructors as students apply the video lessons by solving practical case studies in small team settings. Mini-reviews of the week's material introduce the ungraded exercises, and all teams submit their work online to receive participation points. The session concludes with student presentations of their solutions, accompanied by brief interactive discussions to reinforce the lessons.

As the second half of the flipped classroom, these sessions are also extremely popular, since instructors are available when needed—while students are actually doing their homework. Randomly assigned two- or three-person teams encourage active participation, but the utter dearth of technology-friendly, configuration-flexible classroom options at the U of MN is a significant barrier for this progressive instructional method.

This model requires students to accept responsibility for completing the preparatory lessons on time to allow their productive participation in the Wednesday team learning activities, and not simply show up to absorb a lecture or freeload on their classmates who did complete the assigned background material. Peer pressure and credit for timely completion effectively reinforces this real-world expectation, where any failure to meet assigned deadlines can compromise the performance of other team members and the overall organization.

Tutoring

Tutoring assistance is focused on the period between the Wednesday in-class ungraded work and Friday graded homework submission. Regular office hours immediately follow the Wednesday sessions for those who need additional explanations, and the instructor is also available on Thursday and Friday for those who need help on the graded assignments.

In addition, an online discussion forum allows students to post questions on graded assignments for the instructor to answer, all of which is available for any student to review. Participation in these two tutoring options was generally less than with the traditional lecture-based model, which could well indicate greater comfort with the material as a result of the flipped classroom approach.

Student Mastery

Mastery and competency are confirmed with individual and small team graded exercises and exams. As with Wednesday's ungraded team problem sets, Friday's individually graded assignments are designed to help students understand and apply the conceptual lessons. To avoid overlap with the next weeks' video lesson Tuesday deadline, graded assignments are due late Friday. Students appreciated this discipline to complete the work before their weekends began.

All homework is submitted online, both ungraded and graded. Only the midterm and final are completed on paper. Grading and feedback on the homework is also provided entirely online. The online nature of the course facilitates regular monitoring of students who might be lagging behind. An online forum also enables interactive discussions about common issues.

IMPROVEMENTS IN STUDENT ENGAGEMENT

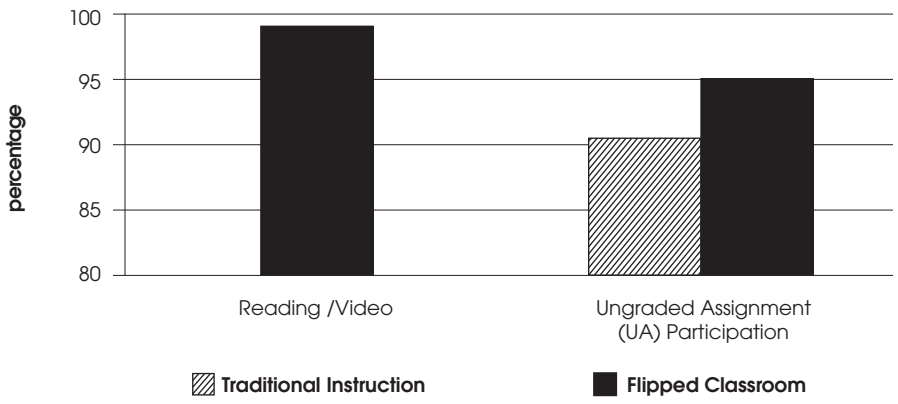
Although monitoring and modification will obviously continue, initial results in the two terms of the 2013–14 academic year were very encouraging. Perhaps most important, student engagement was significantly higher than with the traditional model.

Course evaluation surveys historically document that few students read the assigned chapters —regardless of the teaching methodology. In contrast, completion rates for the videos/quizzes averaged more than 99%, considerably better than the lecture capture rates on my most scintillating of days (Figure 2).

As an even more telling measure, participation rates on Wednesday's in-class small team Ungraded Assignments (UA) averaged 96%, compared with 91% under the traditional model (previous four-term average), despite the same requirement that homework could only be submitted during class to receive credit (see Figure 2). Significantly, attendance with the flipped classroom model remained high throughout the semester, unlike in previous terms when attendance lagged during the latter weeks.

This consistently higher attendance level throughout the term likely reflects the greater

FIGURE 2.
Student Engagement



perceived value of the flipped classroom. With background videos completed ahead of time, and in-person attendance only required one day a week, students know their class time will be well spent. As is the case with professional seminars, attendance over time is a clear indication of whether participants believe it is worth their while—mandatory or not.

Feedback on the student *online discussion forum* provides a clear explanation for such a high level of student engagement—and a compelling endorsement of the new model. This post said it best:

> By the end of the week I understand the material better in this class than in any other class that I have taken at the U. The flipped version of this class is more effective at making me understand the material than the traditional lecture method. The fact that the professors are close by when doing the assignments is very helpful.

Here are a few representative observations, which were remarkably consistent across all students, regardless of background or course performance:

> The thing I like the most is that we can watch the videos as many times as needed, pause if we need to, and come back when we can. By the time we finish the videos, we understand them fully. I also love that we spend Wednesdays solving problems. It helps so much when it comes time to do our own homework.

> I really like the flexibility that the flipped model provides. If there is a topic I already know, I can skip ahead by skimming the videos and then testing my understanding with the quizzes. I don't feel like I am wasting time sitting in a lecture on material I already understand.

> I love the flipped classroom. I like being able to watch lectures whenever I want, and I feel like I'm more likely to pay better attention to what's being said.

> I like the flipped classroom because it allows me to watch the lectures as many times as I need to understand the material. I also like that we use class time to dive deeper into the material, rather than to learn it from the beginning.

> Having time to work through the problems is really valuable, some other courses at this level focus too much on the theory of the course in class and throw you blindly into problems outside of class. That is by no means the case in this course.

> I really enjoy the hands-on group work. It allows us to put the material in use, but we also have the professors and classmates as resources in case we need clarification. By the time I work on Friday's individual assignment, I have a very good understanding of the material. Overall, I love this method.

> I like having the lectures on YouTube where I can pause and rewind the videos and also reference them at a later date. I like that we still have class because I truly do learn a lot from working through the problems with others.

> I like the fact that we can pause the videos to write down notes. In classroom discussions we don't have this option. Another thing I enjoy are the quizzes. I think it's helpful to test your knowledge right after covering the chapter.

> I really enjoy the flipped classroom because it allows me to learn at my own pace, and I believe it is essential for the TA and prof to access their email frequently. Because you two are wonderful at responding I would say it is terrific, and wished all my classes were like this.

> The videos were a nice blend of talking head and PowerPoint. Just enough to keep entertained, but enough information to take effective notes. We used more Excel than in other accounting classes I have taken, which is great and practical.

> I like the brief in-class instruction before doing the UA. It's really nice to hear the information twice (once in depth and once just touching on those key points). Explaining it another way is really helpful just in case something wasn't quite clicking for me.

Two or three students in each class struggled with the new flipped classroom method; about the same proportion as with traditional instruction. These students were generally not as comfortable with the greater flexibility, since it required them to take responsibility for doing the outside work in a timely way and not merely show up in class to passively absorb the material through lectures. Neither does this learning model reward those students who tend to rely on their generic oratory skills to sail through classes; they are required to work with others and actually complete the assignments.

IMPROVEMENTS IN STUDENT MASTERY

Although periodic modifications in general exam structures and specific test questions complicate term-to-term comparisons, student mastery of similar material was measurably better under the flipped classroom model than with traditional lecture-focused instruction (Figure 3).

Graded Assignments (GA)

Scores on individually graded exercises averaged 93% with the flipped classroom, compared with 86% over the four previous terms, as adjusted for the new, more difficult, all-spreadsheet format (Figure 3). GA's in previous years included definitional questions that were routinely all answered correctly; these are now included in the ungraded online quizzes.

The positive differential in individual performance was even greater as assignments became more challenging in the latter portions of the course (Figure 4). Graded Assignments A and B cover budgeting, C and D financial calculations, and E and F spreadsheet analysis.

Graded assignment scores were *significantly* higher when my flipped classroom had access to a technology-friendly Active Learning Classroom in Spring 2014 (Figure 5). A cumbersome traditional lecture hall had to be used for the Fall 2013 term, because no flexible classroom space of any kind was available.

Team Case Studies (CS)

Comparative results on the two team case studies documented similar greater mastery under

FIGURE 3.
Student Mastery

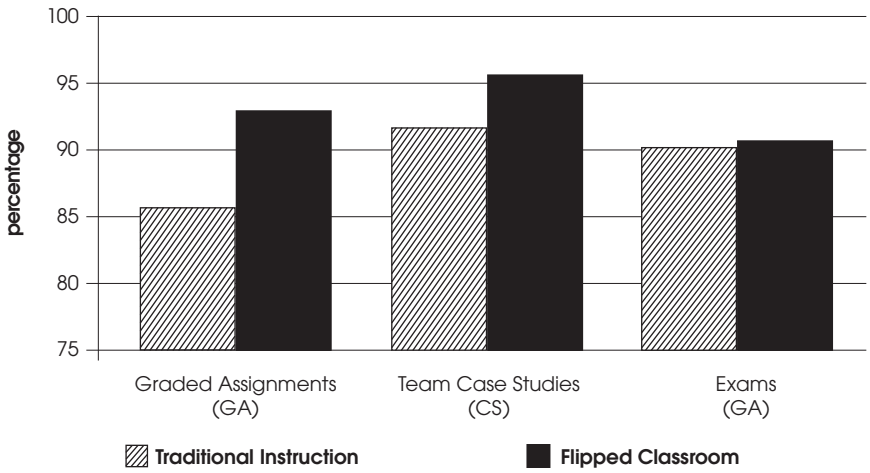
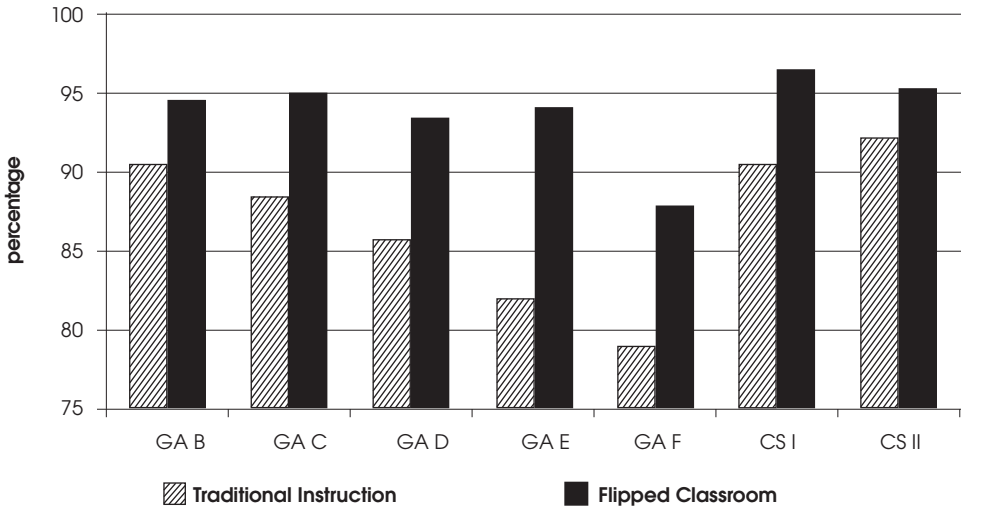


FIGURE 4.
Graded Assignments (GA) and Case Studies (CS)



the flipped classroom model, even considering that Case Study I is now more comprehensive and therefore more challenging (Figures 3 and 4). Scores for both case studies combined averaged 96% under the new instructional method, compared with 92% over the two most recent terms in which these assignments were used.

Exams

Exam scores were generally comparable, due primarily to one prior traditional class, which boasted a particularly high average (see Figure 3). Otherwise, exam scores were slightly higher with the flipped classroom method. Interestingly, the exceptional previous class had *much lower scores* on individually graded GA assignments.

Observations

These demonstrated improvements in student mastery affirm a fundamental premise of the flipped classroom model. Traditional exams, which test rote knowledge on time-limited, resource-restricted tests, are arguably less predictive of real-world success, because they do not mirror the actual requirements of the working world.

Consequently, teaching to the test has less relevance in a course designed to equip students with such practical skills as accepting responsibility for independent learning and collaboratively solving real-life challenges. The significant improvements in individual Graded Assignments (GA) and team Case Studies (CS) are far more appropriate measures, and these results are a particularly meaningful endorsement of the new learning model.

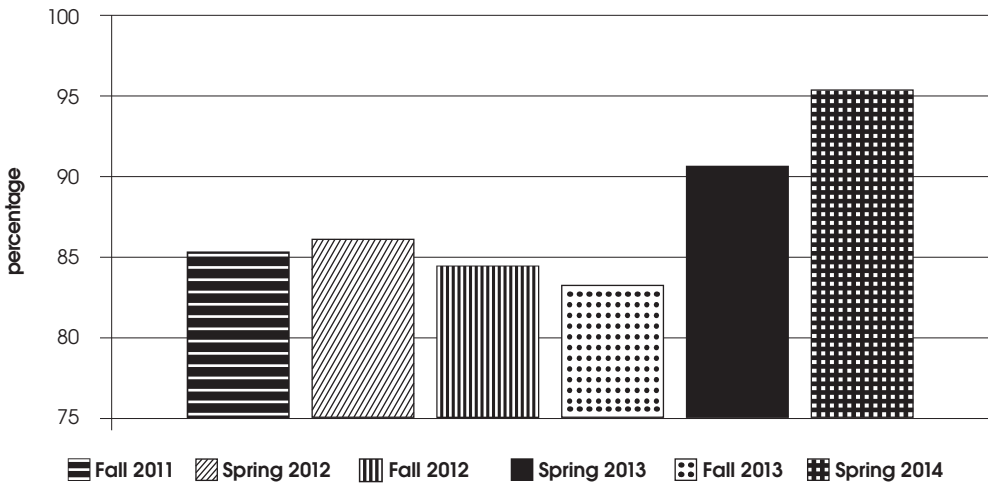
THE ECONOMICS OF FLIPPED CLASSROOMS

Countless audits, research studies, and scholarly articles have documented, in excruciating detail of course, the case for change in our higher education delivery systems. Most recently, the debate took center stage at 2013 state legislative hearings on administrative costs and tuition affordability at our flagship University of Minnesota. The U of MN is hardly unique; all collegiate institutions face dual, interrelated challenges.

Soaring Tuition Costs

First, *tuition costs are pricing our next generation out of what is now their entrance certificate into a*

FIGURE 5.
Graded Assignments, 2011–2014



reasonably productive life. During the dozen years from our oldest daughter's matriculation at the U of MN until the youngest of our five children began her undergraduate education, tuition and fees grew 250%. In the five years since, those costs increased another 35%.

In less than one generation, the cost associated with qualifying for an entry-level job in today's economy more than tripled. Last year, student loan debt topped $1.2 trillion, which is greater than our nation's outstanding balances on auto loans or credit cards and is second only to mortgage debt. Moreover, only a small share of college graduates manage to retire their student loans while still in their 20s.

What's wrong with this picture?

Higher education institutions point to a host of reasons for this pricing disconnect, not the least of which is diminishing state assistance. While greater public investment in higher education is clearly needed in Minnesota, any increase cannot continue to ignore the fundamental problem of a service delivery system overburdened by a costly brick-and-mortar infrastructure.

Byzantine Cost Structure

The solution to the affordability crisis cannot continue to rely on the belt-tightening predilection of most administrators and legislators. Nibbling at the edges and cannibalizing programs is never a sustainable strategy, especially when the fundamental problem is that only a fraction of tuition revenue is allocated to cover the costs most directly associated with learning.

Here are some back-of-the-envelope calculations to illustrate the second challenge: *Tuition prices are mostly driven by fixed, noninstructional costs.* For the undergraduate class I teach, students currently pay about $1,400 each in tuition. With a class size of 45, the U of MN collects $63,000 in total tuition from my students. The university collects another $11,000 in prorated fees, for total gross revenue of about $74,000 from my one class.

In comparison, the U's direct instructional costs for my one course only amount to about $7,500, which includes my single semester course-by-course adjunct instructor contract and my teaching assistant's hourly wages.

That means the costs most directly associated with learning only require about *one tenth* of the revenue collected from my students. The remaining $9 out of every $10 in tuition and fees is used to cover largely fixed, non-instructional and indirect overhead costs, and to subsidize classes with far lower productivity—much smaller classes taught by much higher-priced professors.

My class is the best-case scenario, since that productivity level is dependent on large class sizes and bargain basement instructional expenses. Such a model is obviously not realistic for the long term, and it points to the need for greater productivity across the entire institution as well as a serious commitment to substantially reduce noninstructional indirect costs.

The flipped classroom model helps mitigate both of these issues, since it is eminently scalable. The marginal cost of additional students is close to zero, since many more students can be accommodated with little diminishment in instructional quality. Capacity of the video lectures is infinite, and the hands-on classroom tutoring is readily expandable, especially with TA assistance.

With the traditional lecture model, service quality necessarily degrades as the classroom shifts from interpersonal seminar settings to cavernous lecture halls. The typical option of opening another section simply increases step-variable costs, assuming the physical and personnel capacity even exists.

The current fixed cost structure in higher education can be dramatically improved by the flipped classroom model, since it essentially reduces by up to one half the brick-and-mortar space needed to accommodate a traditional class. In fact, the ongoing savings from eliminating unnecessary spaces might be reallocated to help finance the one-time costs of converting antiquated lecture halls into more technology- and team-friendly Active Learning Classrooms (ALCs), which demonstrably improve student performance. Space savings might also help fund complementary retooling investments in Learning Management Systems (LMSs) that are more flipped-friendly than the U of MN's current Moodle system.

Bottom line? *The current cost structure of our higher education system is clearly not sustainable for either students or institutions.* Without a substantive course correction, the downward spiral toward both personal and institutional insolvency will only continue to worsen. The flipped classroom model represents a viable alternative to reverse this trend and can position our higher education institutions to effectively meet the challenges of our shared futures.

DAWN OF A NEW DAY

Even allowing for the unlikely possibility that my experience is uniquely exceptional, initial results reflect a measurable improvement in both student engagement and mastery under the flipped classroom model. Perhaps more telling, consistent student feedback strongly validates the higher level of interest and understanding attributable to the new instructional model.

Moreover, the flipped classroom model also provides colleges and universities a practical pathway to an alternative future. The approach offers both students and their educational institutions a more effective and efficient learning strategy.

I was hopefully optimistic when I undertook this grand experiment. *I am now a true believer.*

As a medical research study coordinator, my wife is steeped in the systematic processes of the scientific method, which requires excruciating documentation of results from tightly structured and highly controlled experiments. Nevertheless, even painstaking researchers recognize the humanity of ending early those studies that produce demonstrably favorable results. Rather than continue to impose failed protocols on the control groups, *all subjects* are allowed to more quickly benefit from the initial research findings.

Such is the case with the flipped classroom model. While refinements will obviously continue as the method evolves and is adapted to the needs of

specific courses, the benefits are obvious—especially for the students and the institutions we instructors purportedly serve. The framework of my modest pilot is wholly adaptable and scalable throughout higher education.

The academic research actually matters little at this point, since the debate is pragmatically over. With us or without us, this once novel instructional method is becoming the new norm by successfully blending learning flexibility with more effective mentoring. The only remaining question is how and when we teachers will incorporate the concepts into our own courses.

For me, that next step involved flipping my undergraduate class in basic policy analysis, beginning with the Fall 2014 semester. This course introduces students to policy analysis as an academic discipline that offers a systematic, structured way of thinking about the design, development, implementation, and assessment of public policy.

Since the social science disciplines are understandably less definitive than the budgeting and accounting techniques taught in my initial flipped classroom course, the active learning sessions are proving to be even more beneficial for students. Initial results indicate the hands-on value I can add as an experienced mentor are even more useful as students work on open-ended, practical case studies in small teams.

However, to fully realize the promise of this new day, far better institutional support from the U of MN will be needed. Always an adaptive self-starter, and unaware of any fellow pioneers, I relied heavily on my own experiential research to get this far. Growing interest must be accompanied by the necessary infrastructure of technical systems and classrooms expressly designed for the new methodology, accompanied by direct technical assistance and collaborative user forums to support more conversions.

While this methodology might not be appropriate for every course, it obviously can and should be used in far, far more classes. In fact, I am convinced that flipped classrooms should be the presumed default instructional method. The question is no longer, why should it be considered? The question is, why not?

It is abundantly clear that *flipped classrooms successfully blend the best of both traditional lecture and online worlds by introducing learning flexibility, while retaining and improving the efficacy of direct instructional contact.*

When I began this voyage of discovery, I was hoping it really might be that simple, and more important, that profound. Turns out, it is.

ABOUT THE AUTHOR

John Gunyou teaches at the University of Minnesota's Humphrey School of Public Affairs. His distinguished 40-year career includes service as Minnesota's state finance commissioner, first finance director for the City of Minneapolis, city manager of Minnetonka, MN, and board chair of Three Rivers Regional Park District. Gunyou was also a partner with the largest economic consulting firm in the Rocky Mountains, ran Minnesota's original and largest Internet company, and was an executive with Minnesota Public Radio (MPR). He has degrees in finance and economics from the U.S. Air Force Academy, UCLA, and University of Colorado. Gunyou is editorial advisor for the *Municipal Finance Journal* and has published more than 300 journal articles, editorial opinion columns, and sponsored research reports.