CAN FREE-RANGE STUDENTS SAVE SOME SCHOOLS? A CASE STUDY ON A HYBRID CLASSROOM

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ABSTRACT

In the face of budgetary constraints, new marketplace competition, digital innovation and an emerging generation of students with new demands and new needs, higher education in America is challenged as never before. This paper reviews the various challenges facing traditional non-profit educational institutions, considers the potential of an online, technology-mediated curriculum, reviews Constructivist Pedagogical Theory as a viable tool for faculty at traditional non-profit institutions and presents findings from a case study of a technology-mediated, hybrid course inspired by Constructivist Theory.

KEYWORDS

Pedagogy, curriculum, online, constructivist, hybrid

1. INTRODUCTION

Online bullying, global warming, the Lehman Brothers bankruptcy, partisan political grid-lock, the collapse of the 2004 New York Yankees….Perfect Storm Analogies have become popular tropes in assessments of the radical, overwhelming and sometimes life-threatening impact of an unforeseen confluence of forces on individuals, systems, institutions, and social groups.

In the face of budgetary constraints, new marketplace competition and an emerging generation of students with new skills and new expectations, the Perfect Storm Analogy applies to higher education in America as never before. As Schuster and Finkelstein (2007) note:

> In the near-millennium history of the academic profession, there has never been a time when change is occurring so rapidly….economic and technological mega forces…continue to remold academic practice, spanning pedagogy, scholarship, and all aspects of administering and managing colleges and universities (p. 57-58).

Referring to the "tsunami" that threatens higher education, Stanford University president John Hennessy advices, "I can't tell you exactly how it's going to break, but my goal is to try to surf it, not to just stand there." In that spirit this paper will 1) review the marketplace competition facing traditional non-profit educational institutions, 2) assess the emergence of a new generation of learners, 3) consider Constructivist Pedagogical Theory as a viable tool for faculty at traditional non-profit institutions to respond to marketplace competition and serve new learners and 4) present findings from a case study on the implementation of a technology-mediated, hybrid course.

2. NEW ECONOMIC MANDATES

Government support for higher education is at a twenty-five year low and last year support for state institutions fell 7.6% (Kelderman, 2012). Institutional responses to demands for fiscal accountability were predictable: university administrators have frozen tenure-track hiring, increased class sizes, cut funding for research and facilities, raised tuitions and hired more adjunct faculty. Some responses are troubling. Texas A&M University's recent proposal to apply cost-benefit performance metrics on faculty is problematic to many in higher education.

Critics see this kind of review as a harbinger of more blunted, draconian measures that overlook other, significant features of faculty productivity (Simon & Bancharo, 2010). Gerbner (2001) warns that management and assessment models like these, if widely adopted, will "reduce higher education to a form of narrowly conceived job training" (p. 24) and will effectively undermine the essential values and standards of traditional academe.

3. NEW PROVIDERS

In the past decade new educational providers have been making "a meaningful difference" in the competition for students, and for state and federal support (Marklein, 2010). These publically traded, for-profit educational institutions (e.g. The University of Phoenix, Westwood College, Sanford-Brown College) are the fastest growing segment in higher education and currently serve nearly two million students. Cost-comparisons between the For-profits and Non-profits are difficult to accurately assess. (Shapiro & Pham, 2010). It is clear, however, that For-profits can substantially control costs by 1) limiting investments in scholarship, service and infrastructure, 2) focusing on the profitable curricula to the exclusion of less profitable curricula and 3) maintaining a workforce heavily dependent on part-time faculty.

Advocates for the For-profits contend that the asynchronous, online programs that dominate the curricula of these institutions are especially valuable in meeting the needs of non-traditional students; and that this alternative delivery system will eventually prove appealing to traditional students with promises of low-cost education, ease-of-use curricula and accelerated matriculation. The For-profits are in fact gaining significant purchase across the educational marketplace; student loans and federal grants are swelling the revenues of For-profits; California students in For-profits are receiving one-third of all Cal Grant support (Kelderman, 2012); some For-profits are beginning to pursue regional accreditation; and some are buying up Non-profits that are already accredited (Calvert, 2010). Analysts predict that disruptive innovation (Christensen) in the form of "bottom-feeding" by For-profits will most directly threaten the long-term health of public universities. (Parry, 2011)

The For-profits may be in a transition period that parallels IBM's decade-long transition from hardware sales to info-technology and consulting services (Blumenstyk, 2011). From this perspective, For-profits will continue to market degree programs and will branch out to develop other forms of "educational product." In fact, The University of Phoenix is offering new services that can be sold to Non-profits; and Cappella University is producing online curricula for corporate clients – software products that could easily be spun off to Non-profits. There are similar developments outside the educational arena. Corporate media interests -- like Walt Disney Company, The Discovery Channel and News Corporation -- have begun targeting the educational market as an arena for expansion. News Corporation chief executive Rupert Murdoch is "thrilled" with the prospect of generating revenue by providing digital teaching and assessment tools to all educational providers (Barnes & Chozick, 2012).

Traditional colleges and universities also face competition from within their own ranks. MIT and Harvard have invested $60 million in support of edX, a non-profit provider of Massive Open Online Courses; Coursera, birthed by two Stanford professors, sponsors MOOCs at thirty-three different traditional colleges and universities, offering over two hundred courses (Friedman, 2013); and Western Governors University, a public, accredited online university offers BAs and MAs, targeting non-traditional students with "affordable competency-based" learning modules (Kelderman, 2011).

The success of the For-profits has brought increasing scrutiny regarding tuition increases, graduation rates, loan defaults and recruitment practices. In 2011 twenty-three states filed more than fifty bills calling for more comprehensive oversight of the For-profits and the for-profit model. F. King Alexander, president of California State University Long Beach, directly raises the issue of For-profits in his state "milking the system" (Kelderman, 2012, p. A4). Regarding MOOCs, completion rates are disappointing -- often less than 10% of enrollment -- and traditional universities are hesitant to accredit MOOC-based courses (Kolowich, 2013).

4. NEW LEARNERS

The current generation of high school seniors entering university life present yet another challenge to traditional educational institutions (Proserpio & Gioia, 2007). Many first-year students have unique skills, make unique demands of their education providers and will eventually enter a unique post-graduation marketplace. Simply put: this is the first generation of incoming students with personal technology as part of their social DNA (Verhaagen, 2010). This iGeneration is dominated by Digital Natives who take for granted a world characterized by constant, customized, portable, personal connectivity; and demand the same in their educational environs (Rosen, 2007 and Montgomery, 2007).

Some recent, small sample research suggests that these earliest-of-adopters, spawned in a multi-tasking Petri dish of smart phones and Twitter accounts, are beginning to exhibit a subtle form of neural re-wiring:

> The growth curve on the use of technology with children is exponential, and we run the risk of being out of step with this generation as far as how they learn and how they think….We have to give them different options…. (Rosen, 2007, in *USA Today*, p. 2A).

> They're less interested in learning facts and learning data than in knowing how to gain access to it and synthesize it and integrate it into their life….Their brains are developing in ways where they're taking in astronomical amounts of information, screening out unimportant details and focusing on the parts they need (Verhaagen, 2010, in *USA Today*, p. 2A).

New Economic Mandates, New Providers, New Learners – threatening swells in The Perfect Storm roiling on the horizon – are forcing faculty and administrators at traditional universities to "negotiate a new role in a new era" in hopes of preserving the core values and ensuring the special nature of the academy in American culture. Admittedly, there is "a complicated mix of benefits and costs" to be reckoned with in these negotiations (Schuster & Finkelstein, 2006). Historically, colleges and universities have been charged with conserving cultural memory, creating knowledge, and mentoring generations of learners in analytical/practical skills. To this end, educational institutions have focused on three primary domains: students, curricula and scholarship (Christensen & Eyring, 2011). It's clear that -- in the face of The Storm -- the charge, the focus and the domains need to be re-considered, re-calibrated and re-defined. Fashioning new curricula to address a generation of Digital Natives is essential if traditional colleges and universities want to remain competitive in the shifting educational marketplace.

5. CONSTRUCTIVIST THEORY

In terms of serving students and evolving curriculum, Constructivist Education Theory offers intriguing strategies for educators in the non-profit realm. Inspired by Plato's notion that "genuine education" entices students to search rather than memorize, the constructivist credo celebrates a new "transformative relationship" between students and teachers that requires innovative pedagogical strategies that drastically shift the emphasis from top-down practices to shared governance in the learning process. (Buckman, 2007). Hawk (2005) argues that constructivist tactics are uniquely suited for engaging what he dubs "post-modern learners." To this end, faculty need to reject dated notions of sage-on-the-stage academic punditry and adopt the role of maestro-like facilitators who effectively orchestrate and maintain flexible "communities of practice" that foster indigenous, active, collaborative learning environments. Hirtle and Smith (2010) demonstrate how enacting a technology-mediated curriculum that exploits online access, web-based software and personal technologies can engender "deep thinking."

Engaging the Digital Natives by exploiting the technology they already embrace makes sense. Building on McLuhan's notion of mediums-as-messages, Brooks & Brooks (1993) encourage teachers to be creative regarding media used in the curriculum. They insist that before teachers encourage autonomy and initiative by students, they should ascertain students' abiding skills and adjust pedagogical strategies accordingly. Similarly, Short & Reeves (2009) insist that teaching is most effective when content is made available in mediums "fitted to and understood by" all participants. Early childhood educators have recognized this challenge for decades. An early proponent of Constructivist Theory, Constance Kami (1983), uses a horticultural analogy to illuminate successful teaching: "Plants grow not by addition of new parts from the outside but by differentiation and coordination of new parts from the inside."

Educators in business schools have been especially creative in this regard, employing poetry (Morris, Urbanski & Fuller, 2005), film (Bumpus, 2005), TV game shows (Sarason & Banbury, 2004), graphic novels (Short & Reeves, 2009) and Web Sites (Gossett & Kilker, 2006) to engage their classrooms. In regards to student engagement, the distinction between education, communication and entertainment may be moot (see McLuhan, 1960). In this spirit, bell hooks (1994) observes that "the classroom should be exciting, but there is little discussion of that matter in higher education – it is viewed as potentially disruptive of the atmosphere of seriousness assumed to be essential to the learning process."

This theoretical perspective recognizes that talented faculty bring something special to the educational process (critical analysis, knowledge creation) and that the promise of technology-based education offers something equally special (familiarity, collaboration). One way to exploit the respective strengths of traditional faculty and emerging techno-mediated curricula is to design so-called "hybrid" or "blended" classes.

6. HYBRID CLASSES

Hybrid classrooms combine the benefits of traditional face-to-face instruction with the benefits of online learning. Hybrid classes conducted by talented faculty trained in creating such learning communities -- who also engage in substantial research activity -- can offer students a service that the For-profits cannot match. In designing hybrid learning enviornments faculty must re-consider the nature of the Digital Natives they recruit, engage and ultimately serve. Educators have long promoted the notion of nurturing "active learners" but the term has been vaguely defined and may have limited use in regards to today's students (Proserpio & Gioia, 2007). Dismissive notions of multi-tasking, attention-challenged, tweet-mongering teenaged barbarians hacking at the gates of the academy are not helpful – nor entirely accurate. Wolf (1996) for instance suggests that faculty should view the evolving media habits of today's students – often dismissed as a generational failure – as a natural, instinctual response to an environment where constant info-stimulation has become the norm.

Ideally hybrid classes will "speak to" the Digital Natives in a language they hold dear while simultaneously leavening the educational discourse with unique features that only a proven teacher-researcher can inject into a learning community. Kenneth E. Hartman, president of Drexel University Online insists that the future of education will be characterized by "new mixes" of online and in-person teaching (Young, 2011). Christensen and Eyring (2011) predict that expertly fashioned curricula with online, techno-mediated hybrid courses will bring a "learning renaissance" to higher education.

Gameramn's (2006) description of high school classes that encourage the free use of technology in class was instructive. During in-class tests students were allowed to access the Internet, to text and to use analytical software. In the spirit of open-book or take-home exams, free access to information sources was exploited as a means to test to higher levels of competence. And, in the spirit of calculator-use in mathematics classes (circa 1960), open use of technology during tests allowed students to more efficiently process information and streamlined the completion of redundant/mundane tasks.

Informed by classroom experiments like these, in the spring of 2010 I adopted similar pedagogical strategies in a hybrid class in Mass Communications at a mid-sized state university. This paper will document a modest attempt to 1) enact the hybrid curriculum, 2) encourage students to participate a unique techno-mediated learning community and 3) re-calibrate my own role as teacher.

7. THE HYBRID FREE RANGE CLASSROOM

MCOM 491 The History of New Technologies is an advanced seminar class designed for undergraduate seniors majoring in Mass Communication. The class examines theories of innovation and the evolution of communication technologies. In the previous versions of MCOM 491, students were assigned a text, read articles posted on the university's Blackboard site, engaged in Discussion Forums on this site, submitted Email Assignments, took three tests and presented a group project.

In Spring Semester 2010, I adjusted the pedagogical strategy to create a hybrid version of the class. Students were encouraged to become Free Range Students by using personal technology at any and all times

– during lectures, screenings, presentations and tests -- as long as they did not make noise (cell phone conversations, computer games with sound on, etc.). In lieu of a class project, students would construct a small-group Wiki Project; all other tests and assignments were, save for minor updating of materials, identical. The class was usually limited to 20 students. MCM students heard about the proposed syllabus by word-of-mouth. Twenty-five students registered for the class. The class met from 9:30 to 11:50 on Tuesdays and Thursdays. Eight times during the semester, the class did not meet on site but "met" online in real-time.

All undergraduate classes in this department require student evaluations – IDEA Diagnostic Form Reports – that are public record. Students were reminded that their responses on the IDEA forms were public record and were encouraged to respond to both closed and open-ended evaluation questions on these forms. In addition, students were informed that I would closely observe their use of technology in the classroom. All students indicated they were comfortable with the hybrid arrangements.

--Text: *Communication in History* by Crowley & Heyer, 6th Edition
--Handouts - various
--Lectures – Growth of the Internet, communication technologies, theories of innovation
--Electronic Reserves – chapters from previous editions of the text
--In-class screenings – Internet history, technological innovation
--Guests Speakers – Wiki experts from the university's Computer Services Department
--Five Email Assignments – self-reports on personal use of technology
--Regular postings on Blackboard Forums: related to readings
--Three tests: one multiple-choice, one short answer, one long essay
--In-depth critical analysis of a Web Page (cleared with instructor) posted on Blackboard
--Group Wiki Page (selected from a list of topics specified by instructor)

All tests were administered in the classroom. During testing, students could use: the text, the handouts, the Blackboard site, the Internet and personal technology. No talking on phones. No talking to classmates.

8. DATA COLLECTION

A case study approach was employed 1) to assess this first attempt at a hybrid classroom with students "ranging freely" with personal, mobile devices and 2) to compare this class to previous versions of the class. The intrinsic case study method (Stake, 1995) was deemed appropriate for assessing, from multiple perspectives and with various measures, this initial implementation of a techno-mediated learning community that required a re-calibration of student-teacher relations. I compared student evaluations and grades from the hybrid class and from a previous version of the class. I systematically recorded observations of in-class participation and in-class behavior and compared to the previous version of the class. I compared in-class and online participation, test grades and term projects in both classes. I reviewed my own role as teacher in the hybrid environs and compared this experience to my previous experience with the class.

9. OBSERVATIONS AND RESULTS

The Tests:
Average grade on multiple choice test = 88/100
Average grade on short essay test = 78/100
Average grade on long essay test = 75/100

Student Activity During Tests (Instructor observation and unsolicited student comments):
2 students set up chat rooms for communal use.
16 used laptops, 2 used cell phones, 6 used laptops AND cell phones, 2 used Skype.
1 student did not use any technology in the class.
15 used search engines during tests.
14 engaged in online debates about answers to multiple-choice questions.
23 referred to the book and hand-outs during the test.
7 students teamed-up before the test to coordinate technology.

Student responses to testing (as recorded on IDEA Forms):
A new kind of classroom.
Great having to work together.
I liked asking others why they thought an answer was correct.
Gives class a way to think together as a team.
Stimulating. Made me engage in debate.
Not too easy because the info from others makes you question your decisions.
Nice how we could reason things out. But it took longer.
I dig it but it took longer.
Not everything in the chat room was correct.
So many people discussing, it posed a doubt as to who is wrong or right.
I liked the idea of figuring out a problem with someone else.
I liked it but it stressed me out.
Use of personal tech during a test is a crutch, allowing students to study less.
Thanks for letting us use own technology.
I didn't care for this style. Class didn't always follow syllabus.

Assessment of class environment (Instructor's observations):
To varying degrees all Students checked Facebook, Emails, surfed & chat-roomed
3 students studied for other classes on their laptops
All students to varying degrees used technology to record notes from the class
3 students used laptops in class to re-write resumes
3 students used laptops in class to edit videos
19 students used personal technology in class to check follow-up on class content

Student responses to classroom environment (as recorded on IDEA Forms):
We're gonna do this anyway, might as well make it legal.
It's nice to be treated like an adult.
I really like being able to multi-task. I'm getting better & better.
My internet didn't work all the time.
The way other students wack away on their technology bothers me.
I love it! And feel as tho I still pay attention.
It allows us to stay in touch w/other people and ask questions.
Our generation knows how to multi-task.
I think the point is for students to learn, and w/new tech, this is the way we do learn.
It was closer to what you would do to learn something in a non-classroom setting.
If we were confused about something you said we could ask each other.
It's very disrespectful, an odd situation.
Gives the class a way to think together as a team.
When I get a real job, I'll do this all day!

Instructor's Response:
I was humbled: students often ignored lectures, requests for comments and questions-to-the-class.
During screenings students opted to use personal technology in lieu of viewing.
Responses to questions put to the class were delayed, but more accurate and comprehensive.
Compared to previous versions of this class, students took longer to complete tests.
The Wiki Projects were, overall, disappointing.
This hybrid class required significantly more time-investment on my part. I needed an assistant!
I was often surprised and impressed when the class "took hold" of a discussion.

10. CONCLUSION

This attempt at a hybrid, computer-mediated-curriculum was a qualified success. Most students approved of "ranging freely" with personal technology during class and during tests. Final grades were similar to final grades in previous versions of the class. Grades on the (one) multiple-choice test were significantly higher in the hybrid class.

Quantitative student evaluations were slightly higher than those from previous versions of the class. Open-ended evaluative responses were more detailed in the hybrid class. The five Group Wiki Projects were disappointing: all lacked structure, all included a number of "dead" links, only one effectively employed streaming video and only one included original animation. Compared to in-class participation in previous versions of the class, there was more in-class participation in the hybrid class. Compared to previous versions of the class, in-class participation in the hybrid class -- though often delayed and stuttered – was significantly more comprehensive and challenging. I attribute this to student use of personal technology to supplement class material, to challenge my assertions and to engage in collaborative fact-finding. Online student postings in the hybrid class were not significantly different than online student posting in previous versions of the class.

As a teacher, I was forced to accept unfamiliar interactions *with* students and unfamiliar actions *by* students. Occasionally, I felt a loss of control. At times, the class took control – by using personal technologies -- to consider and debate class-related issues. At times, the class took control – by using personal technologies – to engage in extended conversations about issues unrelated to class content. In both scenarios I was a bystander.

Student evaluations, classroom observations, online observations, answers on tests and submitted assignments indicated that at various times, for varied lengths of time and sometimes in unpredictable ways, a unique, virtual learning community came in and out of existence in the hybrid class. In most class room meeting, students engaged in active, indigenous collaborative learning.

Informed by this experience, I plan to (once again) re-calibrate pedagogical strategies in MCOM 491 The History of New Technologies. In the next version of the class, the ranging will not be as free and the group projects will be more closely monitored. Specifically, free-range use of personal technologies will be allowed only during selected class times (testing will remain free-range). I will personally take hands-on direction over the building of Wiki Projects – including in-class instruction and group-specific instruction. The next hybrid class will be assessed in terms of student evaluations, test results and personal observations and I will re-consider the notion of Free Range use of personal technology in MCOM 491.

Finally, considering the results of this modest proposal, it appears that constructionist pedagogical strategies combined with a computer-mediated-curriculum in a hybrid class have significant potential to respond to the needs of Digital Natives. Important questions remain: Can classes like this one be successfully developed, supported and promoted by traditional universities as a means of competing with New Providers in the educational marketplace? Can curriculum innovation like this be scaled to help traditional universities respond to the demands imposed by new economic mandates? Will faculty accept a new role that significantly re-defines what they do as teachers? Will university administrators reward and support faculty who take on this challenge? There is growing evidence that the students are ready – ready for a change they can really believe in.

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