Improving Society's ROI In Educational Investments Via Online Courseware And Experiential Education: The Quest To Achieve Affordable Global Reach

Stanley E Fawcett
Weber State University, Ogden, UT USA

Amydee Fawcett (amydeefawcett@weber.edu)
Weber State University, Ogden, UT USA

Abstract

Higher education faces an existential challenge. Specifically, many indicators now show that society is obtaining a very poor return on its investments in higher education. Despite dramatic increases in costs, students are graduating without the skills that are essential for career and life success. The Association to Advance Collegiate Schools of Business is thus advocating a greater emphasis on experiential learning. We introduce and demonstrate how online courseware can enable more effective experiential education. We then outline how professors can use class time to create an experiential laboratory to create a unique learning culture.

Keywords: Digital Courseware, Global Reach, Experiential Education

Now a revolution has begun, thanks to three forces: rising costs, changing demand and disruptive technology. The result will be the reinvention of the university.—The Economist (2014)

An Existential Challenge

Throughout history, the Academy has been highly regarded precisely because its role has been to advance knowledge and understanding for the benefit of society (see Fawcett and Waller, 2011a,b). As academicians, we pursue this noble trust through our research and teaching. Indeed, we justify our valued place in society, arguing that we are "the keepers" of knowledge discovery and dissemination. We take solace in the pretext that what we do makes the world a better place.

Many observers, however—including parents, politicians, and corporate recruiters—are beginning to doubt the traditional story line. Skeptics increasingly question the Academy's contribution to society, asking, "What is the real return on investment for a college degree?" (Belkin, 2014). Indeed, in April 2018, Tucker Carlson ran a series of exposes on his evening talk show, titled, "Is College Worth it?" His conclusion: College is an expensive vacation that society may no longer be able to afford. Importantly, this societal reflection is taking place even as new alternatives from massive open online courses (MOOCS) to boot camps are emerging.

Understanding the Challenge

Student Debt

Student debt has become big news in America. Consider the following *Wall Street Journal* headline, "Congratulations to Class of 2014, Most Indebted Ever" (Izzo, 2014). Three statistics stand out. First, total student loan debt in America is over $1.4 trillion (Carlson, 2018). Second, over 70% of bachelor's degree recipients are entering the next phase of life with higher education-related debt. Only 20 years ago, fewer than half of students took on debt to finance college. Third, the amount of debt the average student incurs has grown consistently—that is, year after year—since 1994. In fact, average student debt is now approaching $35,000.

The concern is that college graduates are beginning their professional lives with a debt burden that jeopardizes both their financial future and overall economic growth. For example, student debt makes it more difficult to take out a mortgage. The upshot: Pundits are beginning to ask, "Is a college education worth the expense?" The data still indicate that the answer is, "Yes." But, as education costs have gone up faster than inflation, median salaries for college graduates have actually dropped in recent years. Moreover, upon graduation, 41% of college graduates now take jobs that do not require a bachelor's degree (The Economist, 2014). These realities are chipping away at the confidence that higher education promises a good ROI for students, their families, and society.

From a public-perception standpoint, the nature and direction of the costs of higher education give pause to the thoughtful observer evaluating the question of societal ROI. Costs appear to be out of control. Equally important, critics argue that the Academy's priorities are misplaced. With this in mind, let us take a closer look at the numerator of the ROI equation.

Student Learning

Today, the question increasingly driving the ROI debate—even more than increasing costs—is, "Are Colleges Producing Career-Ready Graduates?" (Korn, 2014a). Regrettably, evidence shows that a college degree fails to guarantee that students possess valued skills. Many pundits further argue that the higher education experience falls short on instilling the attitudes and habits young people need to transition into professional roles.

What skills do graduates need to be successful in entry-level jobs? Bud LaLonde's annual survey of career patterns in logistics consistently identified three core skills as critical: (1) problem solving, (2) communication, and (3) people/teaming (Ginter and LaLonde, 2001). Other recruiter surveys have confirmed the importance of this skill set. For example, a 2013 study by the Association of American Colleges and Universities identified the following recruiter priorities:

1 Critical Thinking
2 Complex Problem Solving
3 Written Communication
4 Oral Communication
5 Applied Knowledge in Real-World Settings

Unfortunately, these are exactly the skills recruiters at leading business schools say they are struggling to find in today's graduates. For example, a Gallup survey of business leaders indicated that only 11% "strongly agree" that "today's graduates have the skills and competencies that their businesses need" (WSJ, 2014). Of note, in a separate study by the National Association of Colleges and Employers (2017), significant gaps existed between the skills recruiters are looking for and student readiness (see Figure 1).

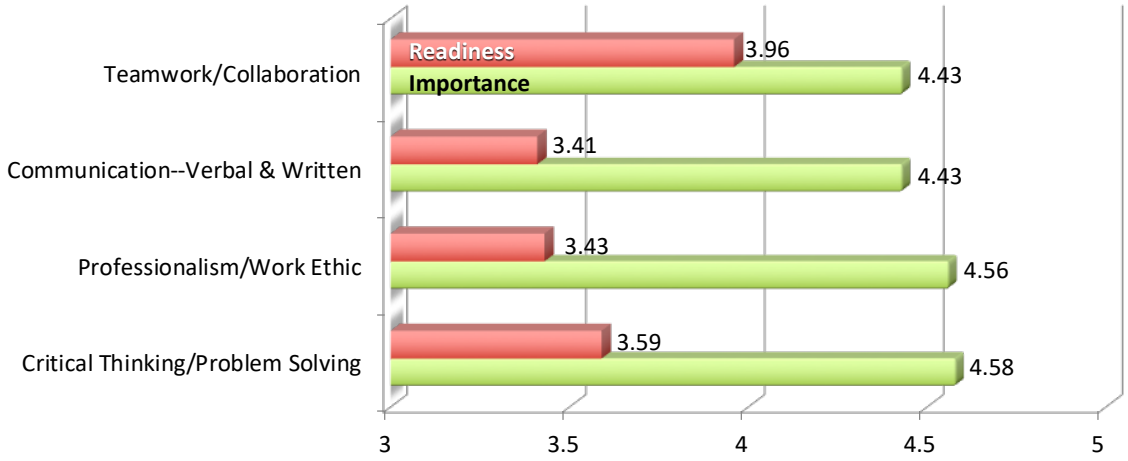

Figure 1 - Student Readiness on Important Skills

What is at the root of this skill gap? Employers in a study by Hult University argued that business schools do not measure student abilities rigorously enough (Korn, 2014b). Other studies support this proposition, showing that students are earning higher grades, but learning less. In one study that analyzed student scores on the Critical Learning Assessment over a four-year time period (freshman to seniors), almost 4 in 10 students did not "demonstrate any significant improvement in learning" (Choate-Nielsen, 2013). Richard Vedder summarizes the problem, saying, "Declining academic standards and grade inflation add to employers' perceptions that college degrees say little about job readiness" (Vedder and Denhart, 2014). One pundit elaborated on both the process and the potential outcome, saying,

> *There has been so much grade inflation in high school and college, so much pressure to move students along regardless of their academic accomplishment, that it is unsurprising to find large numbers of graduates lacking the skills required for available jobs. They may also lack the patience and discipline to learn those skills: If you haven't been required to meet demands in order to receive good grades, then patience and discipline are less likely to be among your habits. For graduates who do find work, the reality of employers' expectations may come as a shock.* (Jacobs, 2013: A15)

To address these educational challenges, the Association to Advance Collegiate Schools of Business is advocating a greater emphasis on experiential learning (AACSB, 2005; 2016). Given these realities, we introduce and demonstrate how online courseware can enable more effective experiential education. Specifically, we address the following pain points:

1. Encouraging student preparation
2. Developing an effective approach formative assessment
3. Customizing lesson plans based on student understanding
4. Flipping the classroom
5. Engaging students via experiential activities in class and online

A Technology-enabled Response: Setting the Stage for Experiential Education

Engage and Assess

At the outset of this session, we will engage the audience via a discussion of today's

existential challenge. The goal is to use this discussion to quickly find out what challenges colleagues are encountering in their efforts to cultivate a more collaborative and experiential learning environment.

Exemplify

We will exemplify how the courseware encourages and enables the following.

- Better student preparation
- The flipped classroom (see Figure 2)
- Fomative assessment and adaptive curriculum design (see Figures 3 & 4)
- Student engagement in collaborative learning—and teaching (see Figure 5)

We will use a PowerPoint deck, videos, an online demo, and object lessons/simulations to actually model an experiential learning environment.

Figure 2 - Tutorial Videos Enable the Flipped Classroom

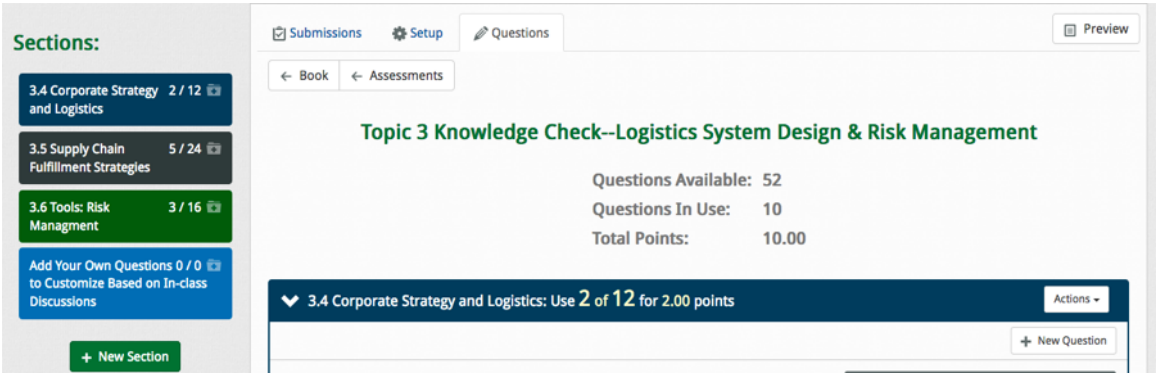

Figure 3 - The Power of Customized Assessment

Total Reading Completion	Total Video Completion	Total Assessment Completion	Average Assessment Performance
79%	67%	99%	93%
100%	100%	100%	92%
84%	100%	91%	90%
100%	100%	100%	89%
73%	100%	88%	89%
88%	100%	94%	89%
69%	33%	94%	89%
95%	67%	94%	88%

Figure 4 - The Power of Formative Assessment

Figure 5 - Time for Collaborative Experiential Learning Activities

Participants will better understand how to design a course and day-to-day class plans to create and deliver an experiential education. Participants will also experience the online courseware and participate in the diverse activities that create a vibrant experiential learning culture. The goal: Help attendees re-perceive how they teach and how their students learn.

Illustrate an Experiential Pedagogy

Numerous studies have called for more experiential education. Likewise, many studies have highlighted the need to bend the cost curve of higher education. We show how technology can enable both goals. We will discuss and demonstrate how a well-designed online courseware can help a professor change the learning culture of the classroom. Specifically, an online courseware can contribute in the following ways

- Increase student preparation for in-class experimentation or create a more engaging hybrid or online experience.
- Make flipping the classroom easier.
- Enable formative assessment and adaptive learning on a day-to-day basis.
- Free up precious class time for more hands-on learning involving case studies, community engagement, object lessons, role plays, simulations, or think-pair-share (TPS) activities. Dedicating more time to experiential activities can enhance learning in both traditional semester formats as well as the intense interactions that take place in hybrid formats.

Conclusion

We will discuss how our efforts are making a world-class supply chain education available to people around the world who otherwise would not be able to access or afford a college education.

Ultimately, to remain relevant, we need to improve the return on society's investment in higher education. Our teaching must help students develop real and meaningful decision-making skills. To do this, we need to address the deficiencies in today's educational model. Simply put, we need to change the way we teach.

Otherwise, we risk helping Clayton Christensen's dire warning to become a reality. Christensen has argued that up to half of American universities will close or go bankrupt within the next 10-15 years—victims of disruptive technologies like massive open online courses (MOOCS) or their derivatives (Lederman, 2017). Given the ROI on a current university education, Christensen may be right. However, MOOCs cannot match the process or outcome of an experiential education. Borrowing from Intel's transformative CEO Andy Grove, the question is, "Will higher education adapt—or die?

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