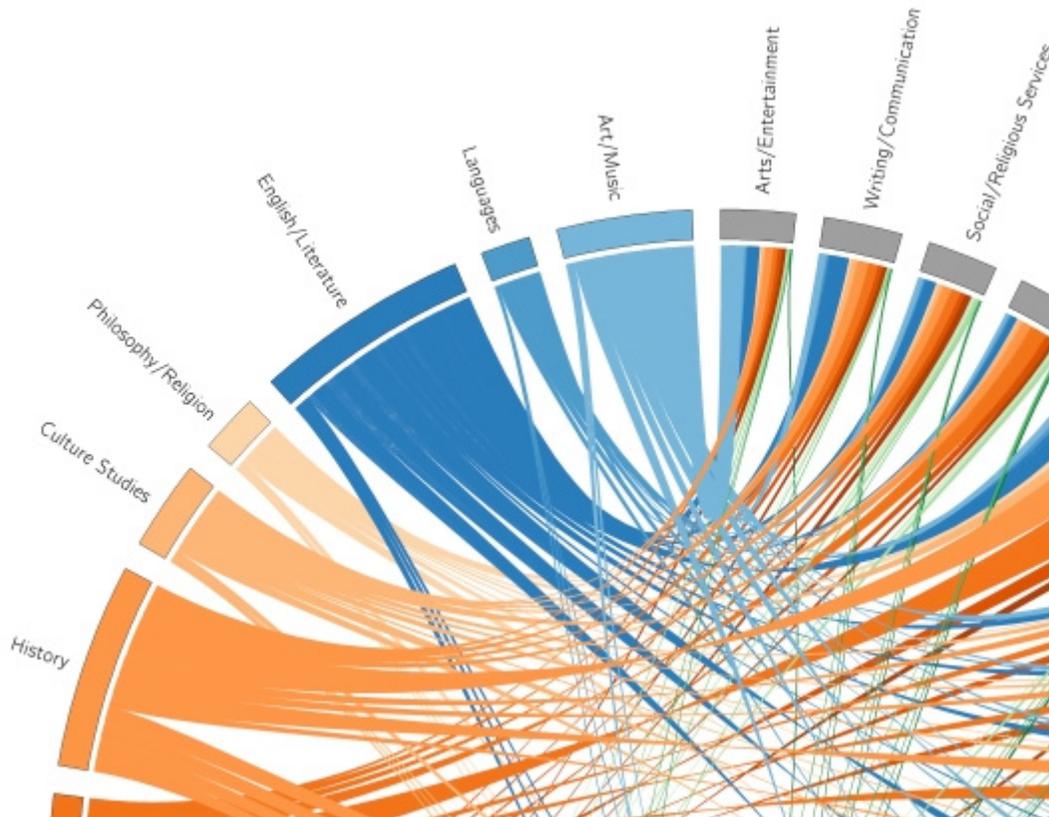


Tracking Alums' Major-to-Career Connections: Williams College



Source: Click [here](#) to access an interactive version of the image above. Dr. Satyan Devadoss at Williams College engaged in his own version of UCO's RCSA with two of his undergraduate students to produce this graphic representation of Williams College's alumni job-to-major visualization (N = 15,600). Devadoss is the 2007 Mathematics Association of America National Teaching Award winner.

TRANSFORMATIVE LEARNING

Assessing Transformative Learning (Pt. 2): Doing and Measuring TL

To assess your success with Transformative Learning, there's a key understanding about any teaching/learning enterprise designed from a TL perspective:

You can't "make" a Transformative Learning experience happen inside students' heads, but you can intentionally create the activities and environments within which it is far more likely to occur, then assess how frequently students report having such experiences.

And herein lies a key to “doing” and then assessing Transformative Learning:

You must build in meta-cognitive and reflective expectations and opportunities for students to notice changes in their thinking, beliefs, and perceptions, and then report them to you.

There are various ways to do this in your class.

First, though, consider that separate and apart from TL, student meta-cognition about their learning — their awareness and assessment of their own learning as it progresses over time — brings great benefits to their academic achievement. This is good to know because it’s important to have conversations with your class about why you’re having them reflect on their own learning — this is a part of the conversation about the transformative experience you’re trying to create in the course.

(What a great conversation to have during the first class session — it can help ensure that your first day of class is hold-your-pee worthy! See this month’s [Great Teaching](#) article.)

Dr. Barry Zimmerman’s work (e.g., Zimmerman, 1990, p.9); shows a strong correlation between academic achievement and students’ ability to self-regulate as learners. In other words, the students who know how they learn best; who manage their learning times, spaces, and processes; and who self-correct course as a result of their self-observations achieve at higher levels.

A big part of “doing” Transformative Learning, then, is requiring students to reflect about their own learning. If you also have assignments which connect to one or more of the Central Six Tenets, then your students get a double dose of benefits: they gain achievement and motivation benefits from becoming better self-regulated learners, and they’re more likely to have a transformative learning experience because the reflection prompts it into their consciousness.

So what do you do to create self-regulation opportunities for students?

Dr. Dee Fink (2003) is a master teacher who describes processes to accomplish this. We’re fortunate at UCO to have Dr. Fink present a workshop as part of our Teaching and Learning Institute for new faculty each August. In the handout from his workshop, (Fink, 2005), the section on reflective aspects of learning suggests the following;

- student journals
- formative feedback from students

- student portfolios turned in at the end of the course

Further, to help instructors know what to ask to prompt meta-cognition and reflection in students, Dr. Fink provides his “In-depth Reflective Dialogue Guide” (Fink, 2005, p. 20; available online — see references).

Here’s what this might look like:

You’re teaching celestial mechanics. You have students turn in a “one-minute paper” at the end of each Friday’s class session (Angelo & Cross, 1993; Fink’s handout also gives a brief description). In Week Six, the question to which students respond with one minute’s worth of writing right before they leave class is, “What are we doing in class that makes it easier for you to learn the material? What are we doing in class that makes learning more difficult?”

Requiring students to think about their own learning, realize what’s working and what’s not, and then report that to you means 1) they are noticing their own learning (or not), which is the first step in self-regulating, and 2) you know how to improve the learning environment to help them be more successful.

Then, regarding the TL aspect of this kind of reflective activity on students’ parts, in Week Seven the one-minute paper question is, “How can you do more of the things that help you learn easily in other of your classes?” Reading those responses may very well reveal at least one student who reports a realization about herself as a learner that may be transformative for her.

Track those kinds of statements. Save them — they are proof that your teaching is helping transform students.

Another example is Dr. Christy Vincent’s Pecha-Kucha assignment: students were required to create 20-slide Powerpoints with a 20-second voiceover per slide in which they described transformative aspects of their learning. (See the [Great Teaching article](#) in the August 2012 issue of TT-S for student examples plus Christy’s explanation.) This is analogous to Dr. Fink’s suggestion about an end-of-course reflective journal. These Mass Communication students had to think about their learning from a meta-cognitive perspective, report it formally to their classmates and their instructor, and bring to conscious awareness what Christy reports in the article: “They realize that they are qualitatively different people as a result of their academic and extra-curricular experiences at our university” (Vincent, 2012, p. 6).

Yet another UCO example exists in Dr. Brad Paynter’s “Calculus and Statistics for Business” class when students realize that, just as surely as

someone grows in his ability to play basketball if he practices daily, they are sure to get better in stats and calculus if they just “practice daily” (Paynter & Teh articles, 2012, pp. 1-2 — see the [TL article](#) in the October 2012 issue of TT-S). Brad’s clever demonstrational analogy had a transformative effect. He could capture those student realizations at the end of the course to document a transformative experience by students who realized something about themselves as learners after his early-in-the-term basketball video.

Doing and assessing TL? One successful approach is:

- 1) Design in TL activities
- 2) Require student reflection about their learning and the TL-connected assignments
- 3) Track over time student self-reports about their TL experiences

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers*. San Francisco: Jossey-Bass. (Available in the CETTL Library.)

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco: Jossey-Bass.

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Vincent, C. (2012, August). Transformative learning: Students’ perspectives. *Transformative Teacher-Scholar*, 5-10. Available: <http://www.uco.edu/academic-affairs/cettl/cettl-files/newsletter-docs/2012-08/2012-08-newsletter.pdf>

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1), 3-17. Available: http://www.unco.edu/cebs/psychology/kevinpugh/motivation_project/resources/zimmerman90.pdf

GREAT TEACHING

Is Your First Day of Class Pee-Worthy?

Have you heard of www.RunPee.com? It's an app you can download that will supposedly tell you which parts of a movie you can skip to go to the bathroom at the movie theater without missing any of the good stuff.

What if there were a similar app purporting to tell students what parts of the first day of class they can “skip out on and not really miss anything”?

We polled some UCO students using a totally convenience-sample process to find out what they might say to programmers of a “RunPee-for-the-first-day-of-class” application. Would they say there are some “totally hold-your-pee” worthy first-day class sessions out there during which there are no dead spots?

While we can't know what these students would have said if they were asked the question below concerning specific instructors in specific classes, we did gather feedback about the first day of class in general based on their college experiences to this point. The question we asked was: “Based on the first day in classes in all the courses you've taken in college, if you had to tell your friends which parts of the “normal” first day of class (any subject) they could miss, what would you say?”

You'll notice a theme beginning to emerge in the following excerpts:

- A senior says that for courses with short class periods (e.g., M-W-F classes with 50-minute class sessions), pretty much the first day is just covering the syllabus, introductions of class members to each other, and maybe a little speech to “scare your socks off.” For such courses, this student says, “[T]he second day is when the real work begins. You can go on the second day and get the syllabus and read it yourself and skip the fiery speech.”
- The syllabus discussion is potential go-to-the-bathroom time according to a freshman: “Because the first day of class is typically used for explaining expectations the professor has for the class, I don't think it is crucial for a student to attend since a student can simply read the assignments and requirements for the course directly from the syllabus.” This student goes on to explain that many faculty email the syllabus before the first class session anyway, and when students get that and can read the syllabus for themselves, the time spent going over the syllabus can be unproductive.
- Another senior contends that time spent describing the textbook or ensuring that students know they must buy it can be a waste of time.

The textbook(s) is(are) listed on the syllabus. 'Nuff said.

- If you want a blow-by-blow in true runpee.com fashion, a transfer student indicated that the entire first day of some courses could be spent in the bathroom with little negative consequence, but for those wishing to parse their priorities, the first class session often divides into the following categories:
 - “You could miss the first ten to fifteen minutes, as it is usually only the passing out of the syllabus and information about the professor’s background.”
 - “Missing the middle of class would only mean missing the reading of the syllabus, which you could do yourself. Depending on the professor, missing the middle or end of class could mean missing the personal introduction of your classmates, many of which you might already know.”
 - “Missing the end of class probably would only mean missing some dead time and some silly questions asked by students.”

Please realize that all the respondents to this unscientific survey made the point that they are not rushing to advise students to blow off the first day of class. Indeed, the transfer student said, “I do not recommend missing the first day of class. Although it may seem tedious, attending the first day of class shows respect and it can help keep you from getting off on the wrong foot. Being in class on time means the professor does not have to hand out a syllabus personally to you,” which is important according to this student because you do not want “a mental checkmark against you five minutes into the semester.”

These students’ comments are evocative. For instance, why read aloud in class something which students can read for themselves beforehand? “But students don’t read the syllabus,” you may respond. Why is that? If it’s not interesting reading, is there a way to make it so? If it just can’t be that interesting because it must include mandated wording which can’t be changed for legal or other reasons, could you give a quiz on the syllabus the second day of class and skip reading it aloud the first day? Would extra credit for a take-home quiz on the syllabus be better?

Some instructors have the class create the syllabus the first day of class based on course outcomes. Students in such a class know the syllabus pretty well after that.

Do you need to spend time on your background? Create a video clip of yourself to do this and post it in the course shell. You could award extra credit for watching and answering a 5-question quiz that could include not just questions like, “From what university did your professor earn his doctorate?”

but questions like, “Within what time frame will I do my best to answer your emails?”

The textbook? Again, post a video in which you describe via visuals with your voiceover the parts of the text you want to highlight or explain how to use.

Perhaps the biggest takeaway from these students’ comments is that first class sessions are often put to poor use in the students’ eyes. Why not offload as much of what students view as time-wasters and jump immediately into the magic the students want in your class right from Day One? Make your first day of class worthy of “holding your pee.”

(For one specific strategy on the first day of class, [the March 2012 issue](#) of Transformative Teacher-Scholar includes a “Great Teaching” article about what you can do the first day of class which is both transformative and gets student buy-in to come to class always prepared.)

READINGS OF INTEREST

Anti-disciplinary Education: A New Way of Conceiving the University Mission?

Sandy Pentland, head of M.I.T.'s Human Dynamics Group, coined the phrase, "anti-disciplinary education." You begin to understand the difference between "anti-disciplinary" and "interdisciplinary" when musing about the following quote from Frank Moss, the former head of the lab:

Today's problems — from global poverty to climate change to the obesity epidemic — are more interconnected and intertwined than ever before, and they can't possibly be solved in the academic or research "silos" of the twentieth century. (Moss, as quoted by Goyal, 2012)

When we think of interdisciplinary classes, we often imagine a team-taught class in which a pair of instructors from different colleges work together to teach a class which has a seat-time equivalent of two individual classes. This is a convenient means of shoe-horning a workaround to accommodate the existing credit-hour system.

How would you structure credits to show on a traditional transcript for a project-based, semester-long class facilitated at various points by any of 14 different professors from six different colleges, all working together with a lead facilitator?

"Can't be done," you say. You may be right, at least within the current higher education infrastructure.

But what if today's society demands just such a college education?

Moss' statement highlights the contention that today's problems are so inextricably linked that those who will solve such problems cannot possibly be prepared to do so with a degree in a single discipline, or even double majors. In the examples he lists in his quote, the crossovers may not be obvious, but they are compelling once you start to dig.

For instance, how is the obesity epidemic linked to climate change, and why would someone working on this problem need to know about both topics? Turns out that, to cite but one example, [recent research](#) by Professor Bruce Blumberg at the University of California - Irvine indicates that the biocide [tributyltin](#) is an obesogenic compound (causes fat gain and storage) within our environment which has increasing effect across generations even if the kids and grandkids (of mice, at least) are not exposed and only the mother came in contact with TBT. Maybe, because TBT is used on buoys and boat hulls as a biocidal agent for algae and other organisms, it is contributing in some way

to a disruption in the oxygen-carbon dioxide cycle.

When scientific advances are made intra-disciplinarily, unintended consequences may be missed due to a lack of extra-disciplinary expertise. Perhaps pure research can still be carried out within the disciplinary silo, but solving social, environmental, political, and financial problems almost certainly requires big-picture thinking due to the intricacies of interrelationships among a variety of factors.

Eli Pariser's [filter bubble concept](#) (2011) colors the anti-disciplinary approach with a slightly different hue, yet one still strongly connected to what we should be doing as we educate students. The "filter bubble" describes the effect of gaining information that's been routed through a search engine which, because of the engine's built-in algorithms, filters specifically on what it "thinks" you will want to see based on your past searches and readings. Pariser warns against an education in which students' views of the world and even access to information within their disciplines have been filtered through algorithms designed to make money for Google or Mozilla.

The silo nature of scientific research has been proved repeatedly to be a detriment when someone outside the discipline proposes a thesis that is immediately condemned by the experts in the field, only to have that thesis confirmed at some point in the future when disciplinary blinders have been loosened.

Bicycle makers contributing anything to aeronautics? That couldn't possibly happen, right?

So perhaps an anti-disciplinary concept is something to think about. Maybe it will take an education system that has done away with the disciplinary degree and instead awards "project degrees" to deal most successfully with intractable global problems. Will some future National Science Foundation hire from a college program that consisted of four years learning about everything necessary to design a means of beaming concentrated solar energy directly to receiving stations on Earth solve humanity's energy conundrum?

That graduate's education would surely have had to include written and oral communication, social dynamics, environmental science, analytics, history, political science, and a range of other "disciplines," wouldn't it?

And by the way, the thinker who is advocating for such a thing has been suggested by the former Assistant Secretary of Education as a fine successor to Arne Duncan for Secretary of Education.

The thinker's name is Nikhil Goyal. His book is *One Size Does Not Fit All: A Student's Assessment of School*.

Mr. Goyal is seventeen.

Goyal, N. (2012). *One size does not fit all: A student's assessment of school*. New York: Alternative Education Resource Organization. Excerpt from Chapter 6 available: <http://blogs.kqed.org/mindshift/2012/10/why-learning-should-be-messy/>

Pariser, E. (2011). *The filter bubble: How the new personalized web is changing what we read and how we think*. New York: Penguin.

eLEARNING

The Real Online Learning Innovation: Humanness

Bucky J. Dodd

On January 8, 2013 The Sloan Consortium in collaboration with the Babson Survey Research Group and Pearson released the 2012 “state of the industry” report for online education. This report, titled *Changing Course: Ten Years of Tracking Online Education in the United States*, provided a benchmark analysis of current trends and pressing issues facing leaders in online learning.

While overall student enrollment in at least one online course continued to grow by 570,000 during 2012 (Allen & Seaman, 2013), one of the more important findings in the report is the increased view of online education as being strategic. Sixty-nine percent of



chief academic officers reported online education as a strategic part of their organization. This emphasis not only indicates current value, but also the future need for ensuring growth and development of quality online learning experiences. In this mist of strategic visions and emphasis for change, there continues to be an ongoing dialogue centering on the merit, quality, student preparedness, and overall acceptance of online learning. Many researchers and professionals in online learning discuss this as a negative finding or a gap between research and commonly held perspectives. In actuality, this skepticism and curiosity to discover more about learning online generates the questions that will propel this discipline into a vibrant area for learning and discovery.

As online education continues to grow and develop, designers of online courses are faced with making difficult decisions that shape the learning experiences of students. In the long-term, students will no longer be classified as “online” or “on-campus” students. They are learners. As learners, they will be able to learn in ways that are accessible to them regardless of time or geographic barriers, but also in ways that help them learn best, given a specific topic, at a specific point time, under any number of contextual conditions. Each learner is different and has the capacity to customize their

environment to optimize their learning experiences. Educators are certainly not absent from this responsibility. There must be highly engaged leaders to challenge, guide and direct learners through this journey. Designers of online learning must embrace the strategic growth in the field, but also consider new models that manage scalability and enhances the essence of humanness in personalized, authentic and transformative learning experiences.

Reports such as the 2012 Sloan Consortium report are always enlightening and provide a new perspective on practice; however, online learning designers must take these findings and move to action. What does it mean? How is this information useful? How can better decisions be made? How will human connections be designed and enhanced in the learning process?

To download Changing Course: Ten Years of Tracking Online Education in the United States, visit http://sloanconsortium.org/publications/survey/changing_course_2012.