THE EVOLVING CURRICULUM

Measuring Effectiveness of Change

A SELECTION OF *INSIDE HIGHER ED* ARTICLES AND ESSAYS

JUNE 2014

ETS on Measuring the Effectiveness of the Evolving Curriculum

Over the past several decades, higher education has been faced with ever-increasing expectations from legislators, parents, employers and even students. Colleges and universities have had to reconsider what students should be learning, how students can most effectively acquire important knowledge and skills, and how to provide evidence of learning. At the same time, students have become more invested in demonstrating their learning and achievement, especially with regard to transferable skills that can benefit them in their careers.

Many institutions have begun to implement assessment plans to meet this challenge and are embracing a culture of assessment as they strive to capture both internal support and external evidence to lead to success. ETS has been leading the way through this collaboration by encouraging the approach put forth in its early paper, *A Culture of Evidence III: An Evidence-Centered Approach to Accountability for Student Learning Outcomes*.[1] In this paper, ETS proposes the benefits of this type of approach:

- "By involving a range of stakeholders in the process and by broadly communicating the results of the process internally and externally, the institution creates a transparent system of accountability.

- "The broader community of stakeholders (students, faculty, administration, governing body, funding agencies and government officials) can be assured through this process that institutional resources are being utilized in appropriate and cost-effective ways.

- "This approach can support a faculty and student focus on the science of learning and pedagogy as a scholarly activity, especially within specific academic disciplines."

It is through this evidence-centered approach that ETS provides student learning outcomes assessments to help institutions effectively and efficiently achieve desired and actionable data that can be used for accreditation and accountability, to demonstrate program effectiveness and for curriculum improvement. *ETS*® Proficiency Profile, for example, assesses core general education skills while the *ETS*® Major Field Tests measure students' mastery of concepts and principles within their major field of study. As the landscape of higher education assessment has changed, ETS has enhanced its assessments to meet the needs of faculty, staff, administrators and students, and make implementation easier. Such enhancements include remote proctoring options and even Certificates of Achievements, designed to help increase student motivation.

While measuring learning outcomes is important, ensuring that students have the support and guidance they need to stay in school and achieve the best outcomes is equally important. In 2013, ETS introduced the new *SuccessNavigator*™ assessment, designed to measure the critical noncognitive factors that directly influence student success. This assessment includes holistic data and student-specific action plans to help institutions improve classroom-based retention rates. As we move to more competency based models of developmental education and distributed learning, understanding student differences in these critical noncognitive dimensions will help ensure all students succeed.

The evolving curriculum in all senses continues to change throughout the higher education community. In collaboration with *Inside Higher Ed*, we're pleased to bring you information to support you in the success of your students and your institution.

Sincerely,

David G. Payne
Vice President and Chief Operating Officer
Global Education Division
ETS

For more information on the ETS higher education products and services, visit **ets.org/highered**.

[1] *A Culture of Evidence III: An Evidence-Centered Approach to Accountability for Student Learning Outcomes.* Catherine M. Millett, David G. Payne, Carol A. Dwyer, Leslie M. Stickler, and Jon J. Alexiou, 2008.

INTRODUCTION

Colleges and universities are constantly rethinking what they teach – at just about every level. Individual professors consider what worked (or didn't) in their courses. Departments ask whether their requirements for majors need revisions. Entire colleges and universities debate approaches to general education, majors and graduation requirements. In American higher education today, there is no single curricular trend – while one college may focus on reading lists or general education, another is exploring the use of badges or competency education to move away from relying on traditional courses and degrees.

The common thread in these shifts is that colleges are responding to increased demands for accountability by asking for more evidence that particular approaches work, and looking for ways to measure the reforms that are made. As a result, the future of the curriculum is very much tied to the ways colleges assess themselves and their students.

The articles and essays in this booklet reflect some of the many shifts taking place. *Inside Higher Ed* will continue to cover the evolution of the curriculum, and we welcome your ideas.

--The Editors

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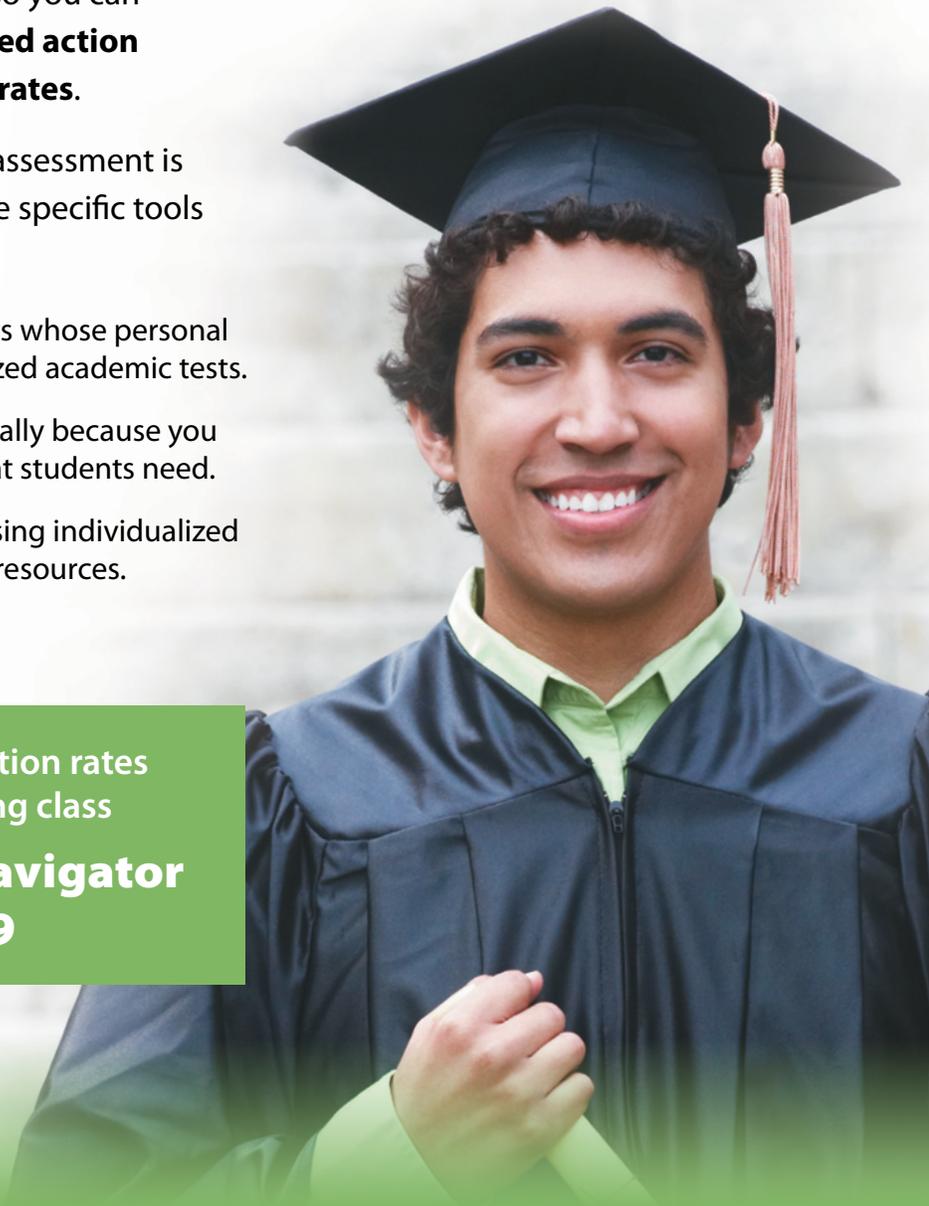
Gen Ed Through Minors

By Colleen Flaherty

A liberal arts college in Idaho tries a new approach to ensure depth as well as breadth in the student experience.

Some colleges have tried to move away from "cafeteria" style general education by requiring students to enroll in interdisciplinary courses, or classes that teach certain ways of learning knowledge -- rather than focusing on specific disciplines. The College of Idaho is trying a new approach, in which students pick disciplines, but most go more in-depth than typically is required of non-majors.

"It's kind of a geek's dream curriculum," said Robert Dayley, a professor of political economy at the college and chief architect of its PEAK program that requires students to have one major and three minors in different curricular areas. "You're challenging the diverse parts of yourself through a guided exploration of your choosing, but the parameters of PEAK require you to do it across the liberal arts."

The possible combinations are numerous, but students cannot major and minor or select two minors in the same curricular area. A number of programs qualify as two or more curricular areas, however, such as the environmental studies major and the criminal justice studies minor.

So a major and minor in biology and chemistry, for example, is out (unless students elect to complete a fourth minor or a second major on top of their three other minors; that choice would likely require the student to complete an extra semester, however).

PEAK is an acronym that stands for professional, ethical, articulate, and knowledgeable – which the college hopes the curriculum will help every student become. (It also takes its name from the mountains surrounding the rural campus.)

The college was reviewing its former, more typical, general education requirements in 2009 when the faculty received an email from the incoming president, Marvin Henberg, challenging them to come up with something innovative that still preserved the ideals of a liberal arts education.

"I think of general education as the space where every faculty member claims every student as his or her own even when those students are not majoring in the particular faculty member's subject area," Marvin said in an email interview. "So it's worth

preserving a general education program that has the active support of today's faculty members (PEAK passed without dissent) precisely so that faculty claim and acknowledge joint responsibility for every student's welfare."

But at the same time, the College of Idaho's former curriculum needed serious work, Henberg said. It had been "tinkered with in ad hoc fashion, and I could find no one on the faculty who could make a compelling case for its aims."

He added: "I don't want to be too hard, for I think this happens at many institutions when there has been, effectively, a generational change in the faculty and new faculty come in without having been part of the conversation that shaped the curriculum of the day."

However harsh, members of the faculty largely agreed with Henberg's assessment.

"It looked a mile wide and an inch deep," Dayley said of the previous core requirements, under which students took one or two courses in each of the major disciplines before starting coursework on their majors. "It duplicated the high school experience and students didn't seem very excited by it. They talked about getting courses 'out of the way.' "

Still, Dayley said, prior to Henberg's email, the faculty review of the curriculum had involved "tweaking on the margins." The incoming president's challenge "opened up the door for us

Luke Daniels, assistant professor of biology at the College of Idaho, helps students.

to think more radically."

Dayley conceived of PEAK in consultation with other faculty members, and presented the plan to Henberg, who approved it immediately. The college's Board of Trustees did as well.

"My endorsement was based on the combined depth and breadth of PEAK," Henberg said. "A student educated with the breadth and depth of PEAK may well, in the years to come after graduation, find him- or herself drawing more on a minor than a major to take advantage of presently unforeseeable opportunities. Three minors in addition to the major gives a wider base than in most curricula."

The president also said it offers students "guided autonomy with discipline." Students, in consultation with faculty advisers, who play a key role in helping students navigate PEAK, select their preferred routes up each PEAK, Henberg said, "but once they have chosen, each minor requires greater depth than in standard general education programs."

Henberg announced that PEAK would be in place within six months, and it was. The first class to enroll under PEAK did so in fall 2010.

Despite the tight time frame, Dayley said planning for PEAK wasn't disruptive for the faculty – some 80 professors, the vast majority of whom are tenure-track or tenured. Some new programs were created, such as the human services professional minor, designed to prepare students for careers in the human or social services through coursework in sociology, psychology and anthropology. But many existing programs simply were coded according to PEAK's curricular areas.

Dayley said faculty conversations about PEAK were different from those typically pertaining to curricular redesign. Notably absent were the "turf battles" over what's part of the core and what isn't, he said. (Although PEAK is largely free of required courses, freshmen are required to take a writing and critical thinking-focused seminar taught primarily by English faculty, as

well as a civilizations course taught by history faculty.)

Paul Moulton, an associate professor of music and associate dean of academic affairs, said the entire faculty was immediately "enamored" with the idea of PEAK. It "made so much sense," he said. And while professors had "hesitations" about the actual launch of PEAK – just how it would work in the first year – Moulton said he's only become more confident in the program and its ability to succeed.

In an email he recently sent to colleagues, Moulton shared an essay from a student who had chosen music somewhat as a backup to fulfill his humanities and fine arts minor requirement. Now the student plans to continue composing and ultimately publish music.

"I remember when I first chose to become a music minor – many of my friends and family were surprised," the student wrote. "I never really had anything to do with music before coming to college: I couldn't read it, definitely couldn't write it, and I wouldn't

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have been able to tell Beethoven from Mozart from Brahms (I didn't even know who Brahms was). Now, though, I can do all those things, and more. I've gained a deeper understanding of music and music theory than I ever suspected I would before coming to college, and all without a single prior lesson."

Moulton wrote in his email: "I read it and thought, yeah! PEAK is working."

Scott A. Johnson, professor and director of the business and accounting program, which was redesigned under PEAK, said the curriculum was the reason he came to the College of Idaho from a faculty position at the University of Greenwich, in Britain.

"At the [business school] where I taught, the preparation for students was even more 'siloed,' " he said via email, "three years of courses only in business (primarily in the major program), with no 'liberal arts' of any kind (no general education outside the business school required). Thus, when the opportunity arose to help build and integrate a business program with liberal arts through the PEAK framework, I jumped at it."

Other students are also enthusiastic about PEAK. Clayton Gefre, a junior majoring in creative writing with minors in history, human biology and interactive journalism, said PEAK was a major selling point for the College of Idaho as he was selecting colleges, and he remains happy with his choice.

"I feel like it makes me a whole lot more multifaceted and gives me a lot more experience to draw from as I'm looking into what I want to do as a career," said Gefre, who hopes to find work as a journalist.

Gefre said friends at other, larger institutions talk about getting required courses "out of the way" before they can move on to their majors. But PEAK allows students to "dive right in" to courses of their choosing, he said.

The creative writing major said PEAK does have its quirks, Gefre said. A friend is frustrated by the fact that she can't double-major in creative writing and art, and had to lose out on art to graduate on time. Other students encounter scheduling conflicts for required courses for various majors or minors. But Gefre said his own experience has been largely positive and that, over all, the benefits of PEAK outweigh the disadvantages.

Professors and administrators said PEAK is still evolving, and that some details, such as scheduling conflicts, still need to be worked out.

John Ottenhoff, the college's vice president, also said he's in talks with the faculty about how to bolster the "professional" aspect of PEAK, to help students think more about career preparation throughout their course of study – not at the expense of the liberal arts, but alongside them.

"How do you help incoming students start to ask that question, 'What does it mean to be professional?' " he said, noting that the college's Center for Experiential Learning, which helps students find internships and job opportunities, could play a bigger role in PEAK going forward. "How do you begin to navigate your way through these different minors in liberal arts disciplines that will help prepare you for the workplace?"

PEAK is also becoming a selling point for the College of Idaho, and a way to distinguish itself from so many other small liberal arts colleges – an increasingly important mission. Enrollment has increased 10 percent since 2009, to 1,122 students this fall -- a record high. Professors and administrators referred to the PEAK program as a tangible "value added" factor for potential students and their parents.

They were divided, however, over PEAK's potential for replicability; Henberg said he thought an analog of PEAK could work anywhere, while Dayley said it may face philosophical challenges from faculties at other institutions and, even more so, logistical challenges related to scheduling -- particularly at large universities where core courses often function as "mini-factories."

But despite the sellable nature of PEAK, both for students going out into the work place and for the college to applicants, those involved with PEAK said it remained firmly rooted in the liberal arts tradition, and its emphasis on intellectual exploration.

"We're not telling students this is a strategic course for the job market," Dayley said, noting that students sometimes are more "strategic" about PEAK than professors are. "Students come in as freshmen and they say, 'These are the four [programs] I want to do,' but we might say […] 'You might think a philosophy major is awesome.' We try to pull them back a little bit." ∎

Badging From Within

By Paul Fain

A digital badging project at UC Davis is drawing notice, but the innovation looks more like competency-based education than a form of alternative credentials.

The University of California at Davis is creating what may be higher education's most promising digital badge system. But the badges are no threat to the university's degrees. They're add-ons – perhaps valuable ones for students.

"Badges can tell a different story," says Joanna Normoyle, the experiential and digital media learning coordinator at the university's Agricultural Sustainability Institute. She says they allow students to "differentiate themselves and tell a narrative."

Normoyle has helped lead the effort by faculty and staff members at UC-Davis to create a badging system for a new undergraduate major in sustainable agriculture and food systems. The final product, which went live with a small pilot group in fall 2013, is more about competency-based education than alternative credentials.

The idea was hatched as the university worked toward the 2011 launch of the sustainable ag major. It's an ambitious interdisciplinary program, featuring collaboration among eight departments in the university's College of Agriculture and Environmental Sciences as well as the Agricultural Sustainability Institute.

The new curriculum is particularly hands-on, with lots of experiential learning that occurs outside the classroom, such as through internships and fieldwork. Much of that learning isn't captured by conventional grading.

The university wanted to help students find ways to describe their experiences, in ways that make sense to faculty, students, employers and themselves. It was a vexing challenge, because any solution had to stretch
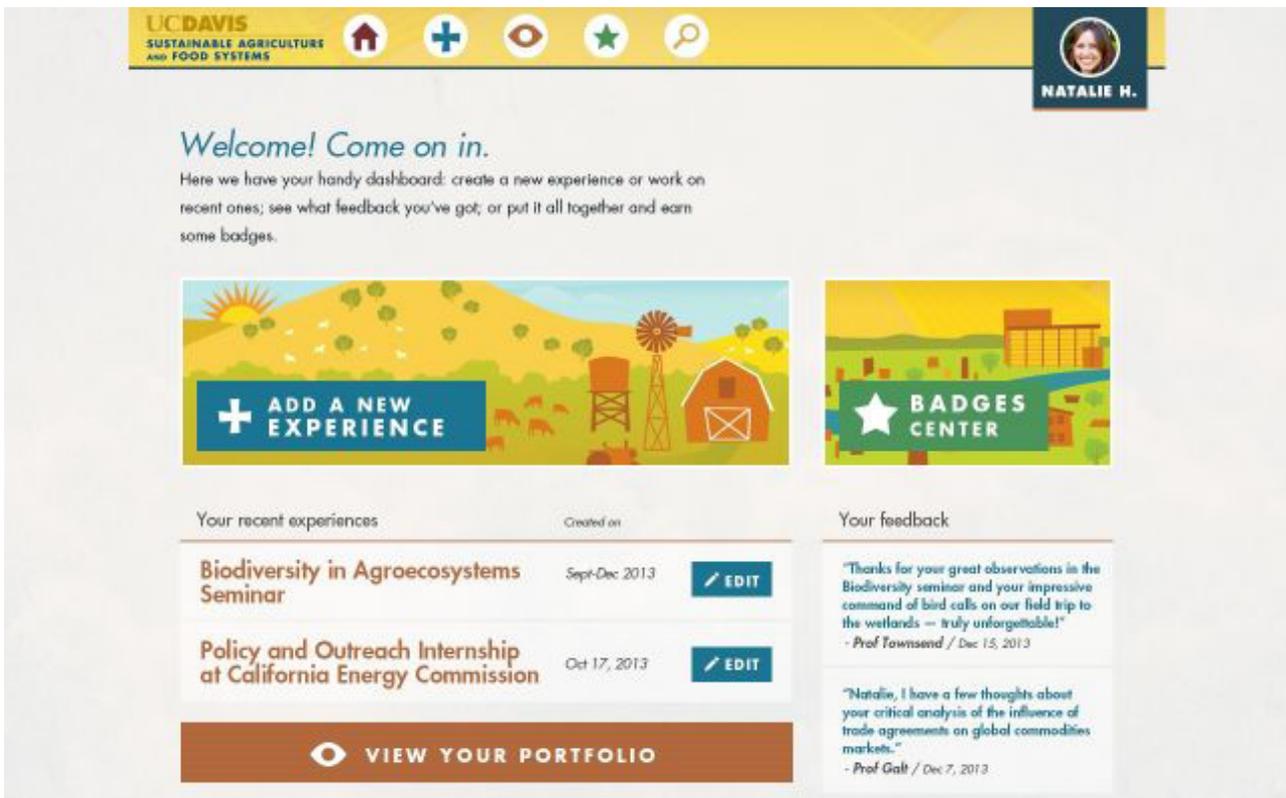
across the entire curriculum – not just individual classes.

Normoyle and her colleagues settled on badges, with an undergirding of competencies that describe the learning outcomes and skills students need to successfully complete the major.

There are seven core competencies in the program. Employers contributed to the identification of those competencies, which include systems thinking, experimentation and inquiry, understanding values, civic engagement, interpersonal communications, strategic manage-ment, and personal development.

For example, competency in systems thinking requires students to integrate societal, environmental and economic perspectives into their analysis of complex systems.

Each competency connects to digital badges students can earn for their experiences, skills and knowledge. The badges themselves are graphical representations of an accomplishment – basically the digital version of a felt patch a Boy or Girl Scout might earn.

In fall 2013, 20 students experimented with the badging system as part of a senior "capstone" course. Badges are not formally awarded at this point, as the system is still in its testing phase. But Normoyle says the sustainable agriculture program plans to expand their use next semester. At some point assessments from faculty members and peers, as well as self-assessments, will be part of a final review process for the awarding of badges.

Students create an online profile where they can display the badges. Each one might be accompanied by detailed information, including a description of the student's experience, what they learned, photos, diagrams or even assessment scores.

Normoyle describes the profiles as learner dashboards or "media-rich, tiled portfolios."

For example, students might earn a badge for collecting soil samples from the student farm to test effects of different mulch treatments. They would write up that learning experience to be eligible for the badge. And the students get to decide which knowledge demonstrates their competency.

Faculty members and other students will be able to see the badges. They can also comment on them. But the students will be in charge of how they display their portfolio of badges.

"This is all about a self-reporting system," Normoyle says. "What do I think about what I know?"

The goal is for students to communicate their skills to others, and to learn about what they know in the process.

"Tools like this can complement what happens in in-person learning," she says.

MODEL COULD SPREAD

Digital badges are a trendy idea. Many predict the nascent form of credentialing could pose a challenge to higher education. Ideally, badges could give people new ways beyond college credentials to prove what they know and can do.

The Mozilla Foundation, an open-source technology pioneer, has helped lead the way with its open badges project. The foundation created a "backpack" that earners can use to display badges on a résumé or social networks.

Along the way, badging has earned plenty of powerful supporters, including Bill Clinton and Education Secretary Arne Duncan.

"Badges can help engage students in learning, and broaden the avenues for learners of all ages to acquire and demonstrate – as well as document and display – their skills," Duncan said in 2011.

Duncan also linked badging to competency-based education, saying it "can help speed the shift from credentials that simply measure seat time, to ones that more accurately measure competency."

Not everybody is sold on badges, however. One reason is that anyone can award one, raising questions about quality control.

Peter Stokes is executive director of postsecondary innovation in the College of Professional Studies at Northeastern University. He's supportive of the concept behind badges, and thinks there are no real technical obstacles to making them work. But Stokes remains skeptical of badges having a major impact on higher education, at least for now.

"The big challenge with the badge is to create currency in the market," Stokes says.

UC Davis is one of the first traditional institutions to give badging a whirl. Purdue University has also been a

pioneer.

Sheryl Grant, an expert on badges who is director of social networking for the Humanities, Arts, Science and Technology Advanced Collaboratory (HASTAC), said the badging work done by Normoyle and others at UC-Davis is the most interesting she's seen in higher education. Grant has helped administer 30 badging projects that won a contest and received support from the Catherine T. MacArthur Foundation.

"They really are solving for something that the current credential system is not doing," says Grant, adding that Normoyle and company are doing so without "upsetting the apple cart" by tossing out the degree.

Grant predicts that UC-Davis's approach is one other colleges will copy. That's because, she says, they used a rigorous process to create a badging system grounded in the values of the institution, faculty, students and employers.

The end result, Grant says, is a "data visualization and recommendation system" that is "going to scale really well."

The university is drawing plenty of attention for the new badges. Normoyle is fielding invitations to speak around the country. Interest is also high on campus and among employers.

Several experts on experiential learning said they are taking badges seriously. So is Michael V. Reilly,

executive director of the American Association of Collegiate Registrars and Admissions Officers.

Reilly said he is in favor of efforts to capture students' experiences outside the classroom, whether through e-portfolios, badging or other ideas.

"The transcript is pretty limited in what it does," he says. "Students want a broader representation of their experiences."

Reilly likes what he has heard about the badging system at UC-Davis, particularly because Normoyle isn't talking about replacing college credentials.

"It's very much the right way to go," Reilly says, "and much less confrontational." ▪

Study Skills, Not Swimming

By Cory Weinberg

Notre Dame will require two one-credit courses for all freshmen on studying, wellness and spirituality, but will no longer demand phys ed or the ability to swim.

Hundreds of universities have done away with physical education requirements and swim tests in the past decade, but the latest is a sports juggernaut where athletes are urged to "play like a champion today" – the University of Notre Dame.

The university announced in April 2014 that freshmen will soon have to take two graded, one-credit courses on topics such as wellness, academic strategies and spirituality instead of having to complete a year of physical education courses – for which there

are a range of options – and pass a swim test.

The new first-year program, in place by fall 2015, will try to fill gaps in "student socialization," "cultural competency" and independent learning with 250-student lecture courses and smaller breakout sessions in residence halls, according a report from the committee that recommended the change.

As a result of the shift, the department of physical education and wellness instruction – which includes

about 13 non-tenure-track faculty – will close. The provost's office will "work closely with those impacted to explore other opportunities for on-campus employment and to develop appropriate transitional strategies," according to the report.

About 39 percent of colleges and universities required students to take physical education in 2010, down from 63 percent in 1998, researchers at Oregon State University and Western Oregon University found.

But of the highly selective private institutions that still have physical education requirements – including Massachusetts Institute of Technology and Bryn Mawr College – Notre Dame certainly has the strongest athletics tradition. The physical education requirement meant Notre Dame was "recognized nationally as a leader"

Rolfs Aquatic Center

in the area, said Brad J. Cardinal, a professor of social psychology of physical activity at Oregon State.

Notre Dame is going forward with the change after a 17-13 vote by the Academic Council, a top policy-making group of faculty members and administrators. That vote margin is narrower than most the group takes on, said the Faculty Senate chair, Paul J. McGinn.

McGinn, a professor of chemical and biomolecular engineering, said some faculty were concerned that one-credit, graded wellness courses will contribute to grade inflation, especially because Notre Dame's academically stellar student body is likely to do well. The current physical education program is pass-fail.

"There was a fair amount of skepticism about how are you going to give a grade and what's the grade going to be?" McGinn said. "It wasn't as warm of an embrace as the people who came up with it thought it would be."

The proposal didn't rouse too much

dissent, McGinn said, because "it's hard to find academic people who will stand up and say we need to have physical education."

Thomas E. Fuja, chair of electrical engineering, was on the physical education department's review group that initially floated the change. He said it didn't surprise him that the program was reorganized because the physical education requirement was "very much unlike what you saw anywhere else in academia. There was a question of whether we were getting value out of that that seemed so at odds of what everyone else was doing."

Cornell University is the only college among Notre Dame's peers that still requires physical education, the group found. The Notre Dame faculty also only recommended keeping the swim test as long "there is a consequence to failing it" – which the university decided to not put in place.

The change "better enables us to meet the evolving needs of our students," Hugh Page, dean of the First Year of Studies program, said in

a release.

The move will allow the university to channel more time in the first-year curriculum to discussions about stress and mental health. A quarter of Notre Dame students have serious mental health concerns, up 17 percent from a decade ago and in line with national trends, according to a study by the university's counseling center.

Cultural competency studies in the new courses will also allow students to "develop a deeper understanding of the complex interactions of gender, sexual orientation, class, ethnicity and race in the U.S.," according to the final committee's report.

The university will still offer voluntary, free courses in activities like swimming and personal fitness. "Although this proposal eliminates the 'physical' part of physical education and wellness, it is expected that the course will help to promote a sustainable culture of physical wellness and wholeness that will, ultimately, inspire increased use of recreation and fitness offerings across campus," the report reads.　■

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Still in Favor of the Flip

By Carl Straumsheim

Despite a seemingly critical new study, the debate about flipping the classroom still tends to favor those in support.

Go ahead and postpone the conversation about the backlash against the flipped classroom model. Supporters and skeptics alike -- and even the researchers behind a seemingly critical new report -- say the discussion continues to be positive.

Flipping the classroom -- the practice of giving students access to lectures before they come to class and using class time for more engaging activities -- hasn't been nearly as divisive as many other ed tech trends, such as massive open online courses or outsourcing digital services. So when *USA Today* in October 2013 reported on an experiment at Harvey Mudd College that had failed to improve student outcomes, it provided a rare contrast.

Some students "said they felt the flipped classroom had a heavier workload," and professors "had to spend considerably more time making and editing ... videos and crafting engaging, hands-on sessions for their classes." A comparison between the flipped classrooms and their traditional counterparts found "no demonstrable difference" in student outcomes. The researchers, the newspaper wrote, "have bad news for advocates of the trend: it might not make any difference."

The study could have fit into a growing body of research calling the science behind flipping the classroom into question. Days later, however, the researchers behind the study said their results and words had been misinterpreted.

Yes, the article did point out that the results were preliminary -- twice in one sentence, even -- but the headline ("'Flipped classrooms' may not have any impact on learning") and hook drew too many conclusions about a study that is set to continue for another three years, they said.

The researchers -- Karl Haushalter, Nancy Lape, Rachel Levy and Darryl Yong -- taught both the flipped and traditional sections of the courses, all of which were in the science, technology, engineering and math (or STEM) fields. They declined to be interviewed for this article, but explained their side of the situation in a social media post after the article was scrutinized by higher education consultant Phil Hill.

"There could be an argument that this article is a case of a reporter trying to find a sensational topic from a nuanced report," Hill wrote. "But the real problems in this article seem to be direct quotes from one of the research professors, despite the qualifier of 'preliminary.'"

Yong warned "that we should be cautious about extrapolating our experience here to other contexts." Harvey Mudd's roughly 800 undergraduates "already spend a lot of time working together in groups in and out of class," and the college's size means there are few of the large lectures that the flipped classroom model aims to supplant.

"Our goal is to better understand the conditions under which flipped classrooms lead to better student outcomes," Yong wrote. "[G]iven our study design and Mudd context, we have not yet seen any difference in student outcomes. Of course, this was only the first year of the study and we are admittedly working out all of the kinks in our flipped classes."

WIDESPREAD SUPPORT

More colleges and universities are growing comfortable with the idea of recording lectures and making them available online. According to data compiled by the Campus Computing Project, more than two-thirds of institutions see lecture capture as an important tool to deliver instructional content. That share has grown steadily.

The widespread support may be why Jonathan Bergmann and Aaron Sams, two of the earliest advocates of the flipped teaching model, said they have not seen a recent surge in criticism. Bergmann called the study out of Harvey Mudd an outlier.

"They're saying they're still in the early stages," Bergmann said. "Most people who have done this have seen positive -- and in some cases dramatically positive -- results." In one such example, Mike Garver,

a professor at Central Michigan University, flipped his classroom and "noticed a huge increase in the number of students earning top marks on his (admittedly) toughest test."

Bergmann and Sams co-wrote the book *Flip Your Classroom: Reach Every Student in Every Class Every Day*, which some credit with starting the flipped classroom trend. Today, they serve on the board of the Flipped Learning Network.

Criticism of the flipped classroom model usually stems from arguments between the didactic and progressive camps within higher education, Bergmann said. Members of the didactic camp oppose flipping the classroom to preserve the role of the lecturer, while the progressive camp instead advocates for a move toward project-based learning and inquiry. "That's where I'm seeing the rub," he said.

There's also the knee-jerk reaction to something new. Students in a flipped classroom can no longer expect to sit through a lecture and complete work on their own time. When coupled with challenging course material and a shaky Internet connection, the change has led many to voice their frustration on social media.

The same goes for professors, who can no longer expect to give 90-minute presentations. The extra work that goes into recording videos and planning classroom sessions has led many faculty members to report an exhausting first year of flipping the classroom.

"Change is a process," Bergmann said. "By year three it's culture."

Even Gary Stager, an education speaker and consultant who has been one of the most vocal opponents of the flipped classroom model, could not point to an intensified debate.

"My first inclination is that when anything becomes that popular, you should be suspicious of it," Stager said. "In my experience, bad ideas are timeless. In education, good ideas are incredibly fragile. I'm not so optimistic there's going to be a big backlash."

Other critics, like Ian Bogost, a professor at the Georgia Institute of Technology who placed himself in the "cautiously cautious" camp on flipped classrooms, said the model is only one of many factors in the larger debate about technology-based educational reform.

"It's not the flipped classroom specifically," Bogost, a game designer and professor in the School of Literature, Media and Communication, said. "It's kind of the evolving anxiety involved with ... the operation and ownership of institutions."

Bogost, who has written critically about flipped classrooms, said experiments such at the one at Harvey Mudd could provide valuable data to determine the effectiveness of larger online courses.

"There is reason to believe that continued investment in even the local, non-scaled, modest version of flipped classrooms will at the end of the day benefit these MOOC-like solutions because they will provide evidence and fodder and materials in general," he said.

Stager agreed, saying institutions will continue to experiment with flipping the classroom as long as there is a promise of reduced costs. "I suspect that people who have been cheerleading it without evidence will continue to do so," he said. "There will be academics who continue to demonstrate that it's ineffective. The question nobody asks is 'Where's the bibliography?' " ∎

The 'I' in FIU

By Elizabeth Redden

*Florida International University has embarked on an ambitious effort
to internationalize the curriculum and assess students' global learning.*

Florida International University may have "international" as its middle name, but only recently has it moved to make global learning a centerpiece of its undergraduate curriculum.

The Miami-based university is very diverse: it is a Hispanic-serving institution, and more than 80 percent of its 40,000 undergraduates are racial minorities. But in seeking input a few years back on possible topics for a Quality Enhancement Plan (QEP) --an institutional improvement plan required by the Southern Association of Colleges and Schools as a condition of reaccreditation – it became apparent that FIU wasn't taking full advantage of its diversity through work in the classroom.

"Being in Miami, you have an incredible mix of nationalities; you can just walk around campus and feel that you're at an international university," said Douglas Wartzok, the provost. "But we weren't sure that the feeling went any further than that, in that students were actually being academically engaged in understanding global issues."

For universities across the country grappling with what it might look like to "internationalize the curriculum," FIU's new two-course global learning requirement and its dual emphases on assessment and professional development offers one model. The university's "Global Learning for Global Citizenship" initiative grew out of the QEP process, and is geared toward helping students meet three universitywide learning outcomes: global perspective, global awareness and global engagement (defined in the box below).

Beginning with entering freshmen in 2010, FIU students must now take at least two courses that have been designed -- or in many cases redesigned -- with these outcomes in mind. There are now 124 "globally infused" courses, all of which had to be approved by the Faculty Senate's Global Learning Curriculum Committee -- as well as the Senate as a whole -- and which must utilize active learning pedagogies, incorporate readings and course materials by international authors, and include embedded assessments designed to measure whether students are meeting the global learning outcomes.

Joan Wynne, an associate professor of urban education who collaborated with several colleagues to redesign a course on the cultural and social foundations of education so it would count as a global learning course, said the previous version of the course focused exclusively on issues in U.S. public higher education, from California to Florida.

In redesigning the course, Wynne said the focus has shifted to emphasize international comparisons. She has increased the number of readings from international journals and, for the final team project, students identify a problem that exists in both the U.S. and a foreign educational system and conduct a comparative analysis. "The idea is to have students start grappling with the larger context of education as it spans the globe, so they become familiar with [things like] how do I get statistics on what's working in other countries versus what's not working here, and what's working here versus what's not working in other countries," Wynne said.

For each course, faculty are expected to evaluate students' global learning based on an assessment matrix. In a course called International Financial Management, for instance, students are assigned a final report in which they analyze the activities of a multinational corporation. Specific questions that students are to answer in that report are designed to correspond with the global learning outcomes.

Using a rubric, faculty determine whether students are meeting minimum criteria for success by, for example, "exhibit[ing] adequate knowledge of the major cultural, economic, social and legal environment faced by multinational organizations and incorporat[ing] this knowledge into analyses and discussion" (thus

demonstrating global awareness) and "employ[ing] understanding of a few obvious cultural differences with the other regions/markets and includ[ing] this understanding into strategic planning and operational details" (a proxy for global engagement).

Deanne Butchey, associate dean for accreditation in the College of Business and a senior lecturer in finance, said the college has an established track record of teaching international business, but the focus on student attitudes (or engagement) is new since the implementation of the global learning requirement. "What we were doing was teaching the important content, the important skills; we were not teaching the attitude – the willingness to solve global problems, the willingness to expand into global markets," she said.

INVESTMENT AND ASSESSMENT

FIU is investing about $600,000 per year in its global learning-related activities, which includes funding for a four-person office of global learning initiatives. The office sponsors (stipend-bearing) professional development workshops for faculty and student affairs staff and is working to increase the number and awareness of co-curricular activities that relate to global themes. The office also coordinates assessment: in addition to collecting data from the embedded course assessments, it is using the Global Perspective Inventory and an internally designed Case Response Assessment (CRA) to determine levels of global awareness, perspective and

engagement among entering freshmen and transfer students and departing seniors. It's too early to compare the pre-test and post-test scores of a single cohort, but preliminary results are already yielding some intriguing findings.

"One is that global perspective is the most difficult outcome to gain high achievement in: it's harder than global awareness and global engagement," said Hilary Landorf, the director of the office of global learning initiatives and an associate professor in the College of Education. "We're also seeing that more is better – that one global learning course, one global learning co-curricular is not enough, so we're very pleased that we offer and actually require multiple opportunities."

As Stephanie Doscher, the associate director of the global learning office, explained, one study compared the pre-test and post-test CRA scores of students who took a single global learning course with those who took a comparable non-global course. There was no discernible difference from pre-test to post-test in the scores of students enrolled in the non-global courses, while for those who took a global learning course, there was a notable change -- but that change was tied to their pre-test scores.

"If you simply compared the average score of all the students at the beginning and end of the course, you wouldn't see a change," Doscher said. "But then when I compared the students in terms of their pre-test score and their post-test score, what I found was that if students came to

the course scoring at least a 1 -- that's a basic knowledge or awareness of interrelatedness, a basic knowledge or awareness of multiple perspectives -- those students did significantly and disproportionately better on the post-test than the students who came in with a zero. And that makes sense in terms of our understanding of cognitive science. If you come to any experience with a cognitive framework, some kind of basic understanding of the information that you are taking in from that experience – if you have drawers in your mind in which to put that information – then you're going to learn more. "

"What we know is that students need opportunities to get to that point where they at least start to get that [basic] knowledge," Doscher continued. "That's why one course isn't necessarily enough for all of our students."

In introducing a global learning requirement FIU did not choose to go one of two other obvious routes:

to strengthen its existing foreign language requirement or to require a study abroad experience, as some smaller colleges or schools have done. Administrators attribute the decision not to focus on these areas to the profile of its students, well over half of whom are Hispanic and, in many cases, already bilingual.

As for study abroad, about 60 percent of FIU's students are low-income and eligible for Pell Grants; a majority are working their way through school and have transferred from community colleges. In other words, these are not, by and large, traditional, 20-year-old undergraduates with the financial wherewithal and freedom to spend a semester in Paris. (Which is not to say the university doesn't encourage study abroad: three of the global learning courses approved so far are study abroad courses.)

"Of course it's something we value, but we know from best practices in study abroad that students need to go abroad within the context of an internationalized home campus experience," said Doscher, who pointed out that given Miami's demographics, many of FIU's students travel independently in the Caribbean or Latin America. "One of the reasons that we focused specifically on the curricular and co-curricular learning experiences here is that so that students who do go out of the country, whether it be with a university program, or whether it be on their own, will have a good, internationalized home

Florida International University students and a communications professor, Daniel Blaeuer, engage in a global learning-related co-curricular activity. Courtesy of FIU.

campus experience."

Moving forward, there are challenges in keeping the initiative relevant on campus and preventing the global learning courses from losing their distinctiveness. Many of the professors or graduate instructors who are teaching global learning courses at this point are not the people who designed them, and they haven't necessarily taken a global learning faculty development workshop. Just over half of faculty teaching global learning courses in the fall completed the assessment matrix expected of them.

And that matters not only in terms of the data collection effort but also because, as Landorf and Doscher have found, in their experience completion of the assessment component correlates with teaching the course "with fidelity."

"I'm seeing some regression back to the mean," said Wartzok, the provost. "It's still going well, but we need to be constantly vigilant to make sure that we don't lose enthusiasm for the whole approach. It's a tremendous amount of faculty time, which is our most important resource, and money." ∎

Going All In on Proficiencies

By Paul Fain

The University of Maine at Presque Isle is moving away from grades to competency-style education for all of its academic programs, with an announcement that drew praise and raised questions.

The University of Maine at Presque Isle is moving beyond grades by basing all of its academic programs on "proficiencies" that students must master to earn a degree.

University officials announced the planned move to proficiency-based curriculums in February 2014. While many details have yet to be hashed out, the broad shift by the public institution is sure to raise eyebrows.

"We are transforming the entire university," said Linda Schott, Presque Isle's president. "In the next four years, for sure, all of our programs will be proficiency-based."

That means students will progress through in-person, online and hybrid degree programs by demonstrating that they are proficient in required concepts, which faculty members will work to develop. Schott said the university will start by converting general education requirements, and then move to majors.

The proficiency-based approach university officials described shares much in common with competency-based programs offered by institutions like Western Governors University, Southern New Hampshire's College for America and the new "Flexible Option" from the University of Wisconsin System.

There are differences, however, university officials said. Presque Isle will not be focused primarily on degree completion for adult students, as are some competency-based (or proficiency-based) programs at other institutions. And while the university does have online offerings, much of its proficiency push will occur in the traditional classroom.

In the rollout, university and state officials said the main reason for the change is to create a more "personalized" approach to learning. Students will have more choice in selecting assignments and can move at their own pace, according to the university.

Schott said more customized degree tracks are possible at the small public university, which enrolls about 1,500 undergraduates and is located in a relatively rural part of northern Maine. A relatively large number of first-generation, underprepared students attend the university.

Self-paced learning is a move away from the credit-hour standard. But the university will continue to link its proficiencies to courses and credits, mostly because of financial aid and accreditation requirements. That approach can also help students who transfer to other institutions.

"We will be mapping them to traditional course equivalencies," said Schott, at least for now. "I don't think that will last forever."

CAREER-READY?

As a starting point for proficiencies, university officials said they would use the learning outcomes that are the framework for the Liberal Education and America's Promise (LEAP) project, which the Association of American Colleges and Universities launched in 2005. The association linked those outcomes, which hundreds of institutions have used, to "authentic" assessments and other research-backed teaching practices.

Carol Geary Schneider, the association's president, had not yet reviewed Presque Isle's plan. But she said the growing emphasis in higher education on learning outcomes and proficiencies is a good thing.

"The focus on proficiencies is a short-hand way of saying that we want students to leave college with the demonstrated ability to apply their learning to important problems and to real-world contexts," Schneider said via email. "That takes a combination of big picture knowledge and hands-on experiences that develop both proficiency and ethical judgment. "

The trend also poses challenges, she said.

Colleges should resist pressure from "course packaging enthusiasts" who seek to commercialize "no practice of any kind required" courses, said Schneider. She said those low-impact academic tracks are often used as a "strategy for accelerating

credit aggregation and faster degree completion."

Work force readiness and affordability were driving forces in Presque Isle's decision to move to proficiencies.

A university news release said the overhauled curriculums would focus on "solving real-world problems" and "hands-on experiences in students' chosen fields." And the grounding in competencies will move learning further toward the "21st Century skills that employers are seeking, such as collaboration, creativity and critical thinking."

Some of that language was alarming to Amy E. Slaton, a professor of history at Drexel University, who has called for caution as competency-based education picks up speed.

Slaton said the university's description of proficiency-based programs as being a good financial deal -- a low-cost solution to student debt -- set up the new curriculums as being "oppositional" to traditional higher education pathways. That's not fair, she said, as both approaches can prepare students to thrive in the workplace.

Furthermore, Slaton said the heavy emphasis on giving students control of their education was a "false form of empowerment." Earning a degree should be hard work, she said, for the student's own good.

"What they're describing allows the student to avoid discomfort," she said.

Duke Albanese had a different take. Albanese, a senior policy adviser for the Great Schools Partnership, a Maine nonprofit, said Presque Isle will

Officials at Presque Isle event in February, 2014

lead the way in Maine and beyond with academic programs that are both more "student centered" and more "relevant" to the workforce. They will also align with state-mandated proficiencies that the Maine's public K-12 schools will be using by 2018.

"This is big news," he said. "It's great for the state of Maine."

NINE-CREDIT 'CLUSTERS'

It's not easy to envision how, exactly, the self-paced programs will work at Presque Isle, in part because they are still being developed. But Raymond Rice, the university's interim provost, gave some clues.

The plan is for faculty members to teach in interdisciplinary "learning communities," he said, that will feature "credit clumps" of 9 or so proficiencies per 15-week term. Each proficiency would track back to a credit.

A student might earn six proficiencies in a semester, for example, with three

more to go in the following term. They wouldn't flunk a course -- because the clusters wouldn't be organized around courses -- nor would they pass one.

To successfully complete each proficiency, students would need to get at least a three on a four-point scale, Rice said. A one or two would mean more work, while a four would be exceptional.

As a result, students must actually do better than they would on the conventional A-to-F grading scale.

"We've just raised our standard from a C-," Rice said of the new proficiency mark.

The university's Faculty Assembly in September 2013 voted unanimously to support the proficiency-based conversion. That doesn't mean every professor jumped on board without reservation.

Rice said some faculty members went through the five stages of acceptance before getting there. But

the decision to increase academic standards "was a big help" for faculty to buy in, he said.

The university won't be the first to layer proficiencies under its academic programs. Capella University, for example, created a competency-based framework a decade ago.

One key reason Presque Isle took the leap, Rice said, is that the "distributive model" of one-off and often disconnected courses is no longer getting the job done. The resulting lack of connectedness in the curriculum has led to an insufficient use of learning outcomes. It can also hurt student retention, he said, particularly in the layered approach to non-credit remedial courses, which can discourage students.

"Nothing really seemed to carry over" between courses, Rice said, with a small number of exceptions. "That led us to proficiency."

For several years the university had been reviewing its general education outcomes.

But that work was "nibbling at the edges," said Rice. This new project is an all-in approach.

The university received a $200,000 grant from the Davis Education Foundation to support the work. A group of 19 faculty members will lead the effort as "innovative teaching fellows."

Likewise, an initial group of 15 incoming students will receiver scholarships to enroll in the first batch of proficiency-based clusters. Schott said students will help the university shape the program by telling faculty members what works, and what doesn't.

"We want their input," she said. ∎

Not So Different

By Colleen Flaherty

New Stanford programs aim to give computer science students a boost -- by adding arts and humanities.

If it seems very Silicon Valley, that's because it is. Stanford University's Faculty Senate approved in March 2014 two new joint-major programs that will allow students to study English and computer science or music and computer science starting in the fall.

Nicholas Jenkins, associate professor of English and director of CS+X, as the joint major program is called, said it will likely attract humanists who want a competitive edge on the job market; computer science-minded students who want to be engaged in the humanities; and a third group of students: digital natives for whom computer science and the humanities don't seem "at opposite ends of the spectrum at all, but continuous."

"I've done a digital humanities project, but I'm sort of middle-aged and grew up in a world where people didn't write code," Jenkins said. Now that's changing. "We're like the last of the dinosaurs."

Jennifer Widom, chair of Stanford's computer science department, said the number of computer science majors has more than tripled in the last five years, making it the university's most popular undergraduate program. So the new joint majors will offer more options to students, including those who didn't enroll thinking they would study computer science. And because technology firms often say they prefer candidates with grounding in the humanities, the joint majors may benefit even the most computer science-minded graduates on the job market.

"Pretty much everyone who majors in computer science at Stanford gets a job," Widom said. "But those [in these new programs] might get more offers, or more interesting offers."

The programs will be rigorous. Widom said it's not "half of a [computer science] major and half of an English major." It's more like "90 percent of one and 90 percent of the other," she said. Students majoring in the new joint programs will have to take two fewer courses in computer science than straight computer science majors, and about the same in English or music.

Music and computer science already have some cross-listed courses. English and computer science have none, but that could change over time, Jenkins said. In their senior year, joint

majors in both programs will complete a capstone project integrating their two disciplines.

CS+X initially was developed by the computer science department. But last month, the Faculty Senate approved a six-year, joint-program initiative that allows for joint majors even in programs other than computer science. That initiative is inspired in part by the 2012 Study of Undergraduate Education at Stanford, which emphasized the university's "determination to breach the silos of students' lives."

That means other hybrid programs could be developed going forward. English and computer science and music and computer science were the first to ask the Senate for approval.

Jennifer Summit, professor of English and chair of the Faculty Senate's Committee for the Review of Undergraduate Majors, said via email that "both proposals have won enthusiastic support at every stage,

Jennifer Summit

and I think everyone recognizes that they represent an exciting new possibility for cross-disciplinary study in a new mode."

Rosemary Feal, executive director of the Modern Language Association, said via email that joint programs aren't necessarily new (Allegheny College, her alma mater, for example, offered

them in the 1970s, in a similar format – core requirements from the two majors and a senior capstone course). But she praised Stanford's new programs for offering students "flexibility and creativity in constructing majors that join disciplines we don't usually think of as aligned, such as English and computer science." ∎

Have Credential, Will Travel

By Paul Fain

Texas community colleges create stackable credentials for jobs in booming oil and gas industry, so students can leave when hired and return later.

Many community college students in Texas are getting jobs in the state's turbo-charged oil and gas industry. But the energy job market can change quickly, so several Texas community colleges have partnered with the industry to create "stackable credentials" that allow students to re-enter college seamlessly when they need more training.

Efficiency is the goal of the statewide effort, which began in 2010.

Community colleges are working hard to keep up with petrochemical companies' demand for workers. The jobs pay well, and many associate degree-holders earn $50,000 to $70,000 a year right out of college.

"We're seeing people from all over the country and world moving here," said Ian Roark, dean of career, technical and workforce education at Odessa College.

The two-pronged challenge for the colleges is to give students the training employers want and to make sure it matches up with offerings at other Texas community colleges. That's because students tend to bounce around the state to follow energy-industry jobs. And they often enroll at a nearby two-year institution to get

From the Alamo Colleges website

additional training when they relocate.

Several community colleges have teamed up to create a central core of 36 credits toward a 60-credit associate degree aimed at oil and gas workers. Those courses, which include 15 credits' worth of accreditor-mandated general education requirements and 21 credits of specialized soft and mechanical skills training, are designed to transfer around the state.

The result is that students can avoid losing credits when they arrive on a new campus or re-enroll, said Lynda Villanueva, vice president of academic and student affairs at Brazosport College."They don't want to have to start all over again, at the very bottom," she said.

CERTIFICATE TO DEGREE

The collaboration in Texas is about more than associate degrees, however. Community college leaders have created a full career pathway for the energy industry, complete with several layers of stackable credentials.

That approach, which appears to be gaining steam in the academy, links a series of certificates and degrees in specific disciplines. Each credential builds upon the previous one, and courses for shorter-term certificates count toward degrees.

Roark said students now have "multiple entrance and exit points" to community college as they progress in their petrochemical-industry careers. At each point they can earn credentials the industry has deemed valuable.

The first layer is a "marketable skills achievement award," which ranges from 9 to 14 credits, said Jeff Parks, dean of industrial and applied technology at San Jacinto College. That short-term certificate shows that a student has the basic training needed to get an entry-level job. Certificates can be tailored to jobs in the energy industry or other technical fields.

Next up is a "level one" certificate, which usually takes a year to complete. For example, a basic certificate in process technology at Brazosport is 15 credits. Others can be more involved, with 18 or more credits.

Level two certificates follow. They tend to be somewhat-specialized 30-credit programs. Eventually students can wrap up 60-credit associate degrees in production or processing technology.

That's not even the last step. Some community colleges have partnered with four-year institutions to create transitions to bachelor's programs for

oil and gas workers. Brazosport, for example, has a transfer agreement with the nearby University of Houston at Victoria for a bachelor's in applied technology.

One reason for the push in Texas is so students who leave for jobs before completing their degree will hold some form of credential. Short-term certificates have some value in the work place, experts said, and can also help students get a head start on a degree if they return to college.

Many of the largest employers in the oil and gas industry, like Chevron or Dow Chemical, require new hires to hold an associate degree. But some will hire students as they work toward that degree, at intern pay levels that can be as much as $22 an hour, according to Roark.

Companies will also sometimes hire students with a level-one certificate. Students tend to return to college after working in those more entry-level jobs.

"They'll get some experience there and then they'll come back," said Parks.

Thanks to the new stackable track, the 36-credit core is constant throughout.

"All of the credits will apply," Villanueva said.

HARD WORK

Stackable credentials sound like common sense. But creating the pathways is harder than it may seem.

"You are asking faculty to do some fundamental redesign," said Kay McClenney, director of the Center for Community College Student Engagement at the University of Texas at Austin.

Faculty members must work with their peers at other colleges to build a core curriculum, which must apply to a wide range of jobs in a career cluster. That might mean adding courses for the common core or changing how courses are taught at some campuses.

"The traditional academic system is not, frankly, friendly to stackable credentials," said Roark, who called the process tedious but worthwhile.

Other states have joined Texas in giving stackable credentials a whirl. Perhaps most notably, North Carolina's community colleges have created a green-jobs pathway across 58 institutions. The colleges eliminated 100 systemwide courses to build the stackable track.

The feds are also encouraging stackable credentials. The U.S. Department of Labor has funded the creation of stackable career pathways as part of $2 billion in work force development grants.

Parks played a leadership role in helping Texas community colleges design their energy-industry curriculum. The work started with a Perkins Leadership Grant, which is a state pot of money aimed at career and technical education.

At the time oil and gas companies were correctly predicting a big wave of hiring, Parks said. Some company officials had contacted community colleges to help them get ready. He and other college leaders used the state money to begin creating an associate degree for the field.

Community college faculty members and administrators joined industry representatives in reviewing a catalog of 1,100 courses to select ones that made the most sense for petrochemical-industry certificates and degrees.

More career paths are going to get the same treatment in Texas, said community college officials there. The allied health and information technology fields are likely candidates, among others.

Rey Garcia, president of the Texas Association of Community Colleges, said the creation of stackable credentials is an emerging trend.

It's hard work, he said, in part because college must work closely with employers.

And in states like Texas, where performance-based funding is being expanded, community college leaders will need to ensure that their institutions get credit for short-term certificates in funding formulas. Decisions about how to count a 15-credit certificate toward graduation rates have yet to be sorted out, he said.

Yet Garcia said stackable credentials are worth the effort, and pay off for both students and employers.

"We've just got to make sure we do it right," he said. ∎

Views Articles

Future-Focused Assessment

By Mark Salisbury

Measuring what students have learned and can do is hard enough, but we really should be trying to assess what our institutions have prepared them to learn later, writes Mark Salisbury.

A central tenet of the student learning outcomes "movement" is that higher education institutions must articulate a specific set of skills, traits and/or dispositions that all of its students will learn before graduation. Then, through legitimate means of measurement, institutions must assess and publicize the degree to which its students make gains on each of these outcomes.

Although many institutions have yet to implement this concept fully (especially regarding the thorough assessment of institutional outcomes), this idea is more than just a suggestion. Each of the regional accrediting bodies now requires institutions to identify specific learning outcomes and demonstrate evidence of outcomes assessment as a standard of practice.

This approach to educational design seems at the very least reasonable. All students, regardless of major, need a certain set of skills and aptitudes (things like critical thinking, collaborative leadership, intercultural competence) to succeed in life as they take on additional professional responsibilities, embark (by choice or by circumstance) on a new career, or address a daunting civic or personal challenge. In light of the educational mission our institutions espouse, committing ourselves to a set of learning outcomes for all students seems like what we should have been doing all along.

Yet too often the outcomes that institutions select to represent the full scope of their educational mission, and the way that those institutions choose to assess gains on those outcomes, unwittingly limit their ability to fulfill the mission they espouse. For when institutions narrow their educational vision to a discrete set of skills and dispositions that can be presented, performed or produced at the end of an undergraduate assembly line, they often do so at the expense of their own broader vision that would cultivate in students a self-sustaining approach to learning. What we measure dictates the focus of our efforts to improve.

As such, it's easy to imagine a scenario in which the educational structure that currently produces majors and minors in content areas is simply replaced by one that produces majors and minors in some newly chosen learning outcomes. Instead of redesigning the college learning experience to alter the lifetime trajectory of an individual, we allow the whole to be nothing more than the sum of the parts -- because all we have done is swap one collection of parts for another. Although there may be

value in establishing and implementing a threshold of competence for a bachelor's degree (for which a major serves a legitimate purpose), limiting ourselves to this framework fails to account for the deeply held belief that a college experience should approach learning as a process -- one that is cumulative, iterative, multidimensional and, most importantly, self-sustaining long beyond graduation.

The disconnect between our conception of a college education as a process and our tendency to track learning as a finite set of productions (outcomes) is particularly apparent in the way that we assess our students' development as lifelong learners. Typically, we measure this construct with a pre-test and a post-test that tracks learning gains between the years of 18 and 22 -- hardly a lifetime (the fact that a few institutions gather data from alumni 5 and 10 years after graduation doesn't invalidate the larger point).

Under these conditions, trying to claim empirically that (1) an individual has developed and maintained a perpetual interest in learning throughout their life, and that (2) this lifelong approach is directly attributable to one's undergraduate education probably borders on the delusional. The complexity of life even under the most mundane of circumstances makes such a hypothesis deeply suspect.

Yet we all know of students that experienced college as a process through which they found a direction that excited them and a momentum

that carried them down a purposeful path that extended far beyond commencement.

I am by no means suggesting that institutions should abandon assessing learning gains on a given set of outcomes. On the contrary, we should expect no less of ourselves than substantial growth in all of our students as a result of our efforts. Designed appropriately, a well-organized sequence of outcomes assessment snapshots can provide information vital to tracking student learning over time and potentially increasing institutional effectiveness.

However, because the very act of learning occurs (as the seminal developmental psychologist Lev Vygotsky would describe it) in a state of perpetual social interaction, taking stock of the degree to which we foster a robust learning process is at least as important as taking snapshots of learning outcomes if we hope to gather information that helps us improve.

If you think that assessing learning outcomes effectively is difficult, then assessing the quality of the learning process ought to send chills down even the most skilled assessment coordinator's spine.

Defining and measuring the nature of process requires a very different conception of assessment – and for that matter a substantially more complex understanding of learning outcomes.

Instead of merely measuring what is already in the rearview mirror (i.e., whatever has already been acquired), assessing the college experience as

a process requires a look at the road ahead, emphasizing the connection between what has already occurred and what is yet to come. In other words, assessment of the learning that results from a given experience would include the degree to which a student is prepared or "primed" to make the most of a future learning experience (either one that is intentionally designed to follow immediately, or one that is likely to occur somewhere down the road).

Getty Images

Ultimately, this approach would substantially improve our ability to determine the degree to which we are preparing students to approach life in a way that is thoughtful, pro-actively adaptable, and even nimble in the face of both unforeseen opportunity and sudden disappointment.

Of course, this idea runs counter to the way that we typically organize our students' postsecondary educational experience. For if we are going to track the degree to which a given experience "primes" students for subsequent experiences -- especially subsequent experiences that occur during college -- then the educational experience

can't be so loosely constructed that the number of potential variations in the order of a student experiences virtually equals the number of students enrolled at our institution.

This doesn't mean that we return to the days in which every student took the same courses at the same time in the same order, but it does require an increased level of collective commitment to the intentional design of the student experience, a commitment to student-centered learning that will likely come at the expense of an individual instructor's or administrator's preference for which courses they teach or programs they lead and when they might be offered.

The other serious challenge is the act of operationalizing a concept of assessment that attempts to directly measure an individual's preparation to make the most of a subsequent educational experience. But if we want to demonstrate the degree to which a college experience is more than just a collection of gains on disparate outcomes – whether these outcomes are somehow connected or entirely independent of each other – then we have to expand our approach to include process as well as product.

Only then can we actually demonstrate that the whole is greater than the sum of the parts, that in fact the educational process is the glue that fuses those disparate parts into a greater -- and qualitatively distinct -- whole.   ∎

Mark Salisbury is director of institutional research and assessment at Augustana College, in Illinois.

Crowdsourcing the Curriculum

By Michael P. Ryan

When humanities professors plan their courses, writes Michael P. Ryan, they should ask students what they would like to see on the syllabus.

Undergraduate students should join professors in selecting the content of courses taught in the humanities.

This is the conclusion I came to after teaching Humanities on Demand: Narratives Gone Viral, a pilot course at Duke University that not only introduced students to some of the critical modes humanists employ to analyze new media artifacts, but also tested the viability of a new, interactive course design.

One semester prior to the beginning of class, we asked 6,500 undergraduates -- in other words, Duke¹s entire undergraduate student body -- to go online and submit materials they believed warranted examination in the course.

Submissions could be made regardless of whether a student planned on enrolling in the course. In response, hundreds of students from a variety of academic disciplines, including engineering, political science, religion, foreign languages, anthropology, public policy and computer science, submitted content for the class.

This interactive approach, which I call Epic Course Design (ECD) after German playwright Bertolt Brecht's theory of epic theater, represents a radical break with traditional course-building techniques. Generally, humanities instructors unilaterally choose the content of their syllabuses -- and rightly so. After all, we are the experts. But this solitary method of course construction does not reflect how humanists often actually teach.

Far from being viewed as passive receptacles of instructional data, humanities students are often engaged as active contributors. With this in mind, ECD offers a student-centered alternative to traditional course-building methods. Importantly, ECD does not allow students to dictate

the content of a course; it invites them to contribute, with the instructor ultimately deciding which (if any) student-generated submissions merit inclusion on the syllabus.

Nevertheless, when a colleague of mine first heard about my plans to allow students to determine what was to be examined in Narrative Gone Viral, he was deeply skeptical: "But students don¹t know what they don't know," he objected.

In my view, that is not a problem -- that is the point; or at least part of it. For crowdsourcing the curriculum not only invites students to submit material they are interested in, but also invites them to choose material they believe they already understand. Student-generated submissions for Narratives Gone Viral included popular YouTube videos like "He-Man sings 4 Non Blondes," "Inmates Perform Thriller" and "Miss Teen USA 2007- South Carolina answers a Question."

While my students were already exceedingly familiar with these videos, they clearly didn't always see what was at stake in them.

All of these works are worthy of academic scrutiny: the "He-Man" piece is interesting because it confronts preconceived notions of masculinity; "Inmates Perform Thriller" prompts questions of accessibility to social media; "Miss Teen USA" is notable because it reveals how viral videos often appeal to a viewer's desire to feel superior to others.

I am not proposing that all humanities courses should integrate this approach. What I am suggesting, however, is that ECD represents a viable alternative to more familiar course-building methodologies.

This includes classes that do not focus on social media and/or popular culture. Importantly, whether students will be interested in suggesting texts for, say, a course on medieval German literature is not the crucial question; in my view, the crucial question is: Why should we refrain from offering motivated students the opportunity to do so, if they wish?

There was relatively little repetition in student submissions for Narratives Gone Viral, an indication that students were reviewing posts made by their peers, weighing their options, and responding with alternative suggestions.

To put a finer point on the matter, students were not merely submitting course content: they were discussing the content of a course that -- in every traditional sense -- had yet to even begin. ∎

Michael P. Ryan is a visiting assistant professor of German studies and the American Council of Learned Societies new faculty fellow at Duke University.

Thinking for Oneself

By Michael Roth

Too much discussion of the humanities and its alleged irrelevance ignores history, writes Michael Roth.

Over the last year there has been a steady stream of articles about the "crisis in the humanities," fostering a sense that students are stampeding from liberal education toward more vocationally oriented studies. In fact, the decline in humanities enrollments, as some have pointed out, is wildly overstated, and much of that decline occurred in the 1970s and 1980s. Still, the press is filled with tales about parents riding herd on their offspring lest they be attracted to literature or history rather than to courses that teach them to develop new apps for the next, smarter phone.

America has long been ambivalent about learning for its own sake, at times investing heavily in free inquiry and lifelong learning, and at other times worrying that we need more specialized training to be economically competitive. A century ago these worries were intense, and then, as now, pundits talked about a flight from the humanities toward the hard sciences.

Liberal education was a core American value in the first half of the 20th century, but a value under enormous pressure from demographic expansion and the development of more consistent public schooling. The increase in the population considering postsecondary education

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was dramatic. In 1910 only 9 percent of students received a high school diploma; by 1940 it was 50 percent. For the great majority of those who went on to college, that education would be primarily vocational, whether in agriculture, business, or the mechanical arts. But even vocationally oriented programs usually included a liberal curriculum -- a curriculum that would provide an educational base on which one could continue to learn -- rather than just skills for the next job. Still, there were some then (as now) who worried that the lower classes were getting "too much education."

Within the academy, between the World Wars, the sciences assumed greater and greater importance. Discoveries in physics, chemistry, and biology did not seem to depend on the moral, political, or cultural education of the researchers – specialization seemed to trump broad humanistic learning. These discoveries had a powerful impact on industry, the military, and health care; they created jobs! Specialized scientific research at universities produced tangible results, and its methodologies – especially

rigorous experimentation – could be exported to transform private industry and the public sphere. Science was seen to be racing into the future, and some questioned whether the traditional ideas of liberal learning were merely archaic vestiges of a mode of education that should be left behind.

In reaction to this ascendancy of the sciences, many literature departments reimagined themselves as realms of value and heightened subjectivity, as opposed to so-called value-free, objective work. These "new humanists" of the 1920s portrayed the study of

literature as an antidote to the spiritual vacuum left by hyperspecialization. They saw the study of literature as leading to a greater appreciation of cultural significance and a personal search for meaning, and these notions quickly spilled over into other areas of humanistic study. Historians and philosophers emphasized the synthetic dimensions of their endeavors, pointing out how they were able to bring ideas and facts together to help students create meaning. And arts instruction was reimagined as part of the development of a student's ability to explore great works that expressed the highest values of a civilization. Artists were brought to campuses to inspire students rather than to teach them the nuances of their craft. During this interwar period a liberal education surely included the sciences, but many educators insisted that it not be reduced to them. The critical development of values and meaning was a core function of education.

Thus, despite the pressures of social change and of the compelling results of specialized scientific research, there remained strong support for the notion that liberal education and learning for its own sake were essential for an educated citizenry. And rather than restrict a nonvocational education to established elites, many saw this broad teaching as a vehicle for ensuring commonality in a country of immigrants. Free inquiry would model basic democratic values, and young people would be socialized to American civil society by learning to think for themselves.

By the 1930s, an era in which ideological indoctrination and fanaticism were recognized as antithetical to American civil society, liberal education was acclaimed as key to the development of free citizens. Totalitarian regimes embraced technological development, but they could not tolerate the free discussion that led to a critical appraisal of civic values. Here is the president of Harvard, James Bryant Conant, speaking to undergraduates just two years after Hitler had come to power in Germany:

To my mind, one of the most important aspects of a college education is that it provides a vigorous stimulus to independent thinking.... The desire to know more about the different sides of a question, a craving to understand something of the opinions of other peoples and other times mark the educated man. Education should not put the mind in a straitjacket of conventional formulas but should provide it with the nourishment on which it may unceasingly expand and grow. Think for yourselves! Absorb knowledge wherever possible and listen to the opinions of those more experienced than yourself, but don't let any one do your thinking for you.

This was the 1930s version of liberal learning, and in it you can hear echoes of Thomas Jefferson's idea of autonomy and Ralph Waldo Emerson's thoughts on self-reliance.

In the interwar period the emphasis on science did not, in fact, lead to a rejection of broad humanistic education. Science was a facet of this education. Today, we must not let our embrace of STEM fields undermine our well-founded faith in the capacity of the humanities to help us resist "the straitjackets of conventional formulas." Our independence, our freedom, has depended on not letting anyone else do our thinking for us. And that has demanded learning for its own sake; it has demanded a liberal education. It still does. ∎

Michael Roth is president of Wesleyan University. His new book is Beyond the University: Why Liberal Education Matters.

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A False Choice

By Gloria Cordes Larson

Students and the colleges that teach them need not focus on only hard and soft skills, writes Gloria Cordes Larson.

There has been extensive hand-wringing about what can be done to help young graduates succeed in today's tough labor market – especially in the spring, as high school seniors decide on their college offers, and college seniors prepare to graduate and face the world. Unemployment and underemployment rates among recent college graduates in the United States – largely a result of the recession's lingering damage – are too high. And we've all seen the headlines questioning the value of college and the surveys that show employers bemoaning the "preparedness gap."

But I am full of optimism.

As a university president, I spend far too much time among skilled, talented, motivated young people to be anything but hopeful about the future of higher education and the capabilities of the millennial generation – those born roughly between the early 1980s and the early 2000s. And honestly, surveys by my institution, Bentley University, of recruiters and students don't reflect these headlines.

It's perplexing. Is there such a disconnect to good jobs with this generation? And if there is one, let's figure out how to resolve it instead of repeatedly touting the problem. So we chose to dig a little deeper and try to uncover the real issues. How do key stakeholders actually view the preparedness issue? And, more important, what will it take to ensure that millennials are fully prepared to succeed in the workplace?

We commissioned KRC Research to conduct a comprehensive preparedness survey of over 3,000 stakeholders, including employers, higher education leaders, students, parents, and recent college graduates. The survey found consensus in surprising places -- from rating recent graduates' level of workforce preparedness to defining exactly what preparedness means.

One of the most interesting sets of findings revealed that businesses are conflicted about the skills they want in their new employees and, consequently, are sending mixed messages to the marketplace. A majority of business decision-makers and corporate recruiters say that hard and soft skills are equally important for success in the workplace. (Hard skills are tangible ones, such as a student's technical and professional skills, while soft skills include communicating well, teamwork and patience.)

Yet when asked to assess the importance of a comprehensive set of individual skills, business leaders put soft skills at the top of their list and industry and job-specific skills at the bottom; only 40 percent of employers say that the latter are important to workplace success. But while employers say soft skills are vital to long-term career success, they prefer to hire candidates with the industry-specific skills needed to hit the ground running, even if those candidates have less potential for future growth.

In the face of such conflicting information from employers, how should students and educators respond? Should they emphasize soft skills or hard skills?

The answer: This is a false choice. Students don't need to – and shouldn't have to – choose between hard and soft skills. It's important for colleges to arm students with both skill sets -- whether a student is majoring in business or literature. By developing curriculums that fuse liberal arts and professional skills and by providing hands-on learning experiences, we can give our students the range of skills that are critical for the modern workplace.

This "fusion" was one of the popular solutions tested in the survey, and many schools are doing it already. Brandeis University, a private university with a liberal arts focus, says that its new undergraduate business program is already one of its most popular majors. (Brandeis points out that most of its business majors are double majors.) At West Virginia University, the College of Business and Economics and the School of Public Health have partnered to create

a dual-degree program that will infuse business skills into the field of public health. At Georgetown's McDonough School of Business, students in the freshman "Ethics of Entrepreneurship" seminar take on a semesterlong project designed to help them flex their critical thinking and writing muscles in a global and social framework.

Bentley has also adopted several strategies to ensure we are preparing our students for success. Virtually every student here majors or minors in business, while simultaneously pursuing a core of arts and sciences courses that focus on expanding and inspiring traditional "business" thinking.

We recently expanded on our popular liberal studies major, an optional second major combined with a business major, by launching six-credit "fusion" courses co-taught by business and arts and sciences faculty. Combinations include a management course (Interpersonal Relations in Management) with an English course (Women and Film) to explore how women are perceived in film and how this can affect management styles; and a global studies course (U.S. Government and Politics) with an economics course (Macroeconomics) to teach how politics and economics work together and to demonstrate that understanding both is often essential to doing either one well.

All this study must be combined with hands-on, "experiential" learning – the pathway to hard skills. This is where business organizations can play an important role. Santander, the global, multinational bank, created a scholarship program to support academic, research, and technological projects – we are proud to be one of the 800 institutions in their program. Corporate partners can also help shape curriculums to teach skills as they are actually practiced in the workplace.

EY LLP (formerly Ernst and Young) worked closely with us to merge accounting and finance for freshmen and sophomores, since those disciplines are inextricably linked in the business environment.

These strategies aim to equip students with both hard and soft skills and they can be adopted and adapted by many colleges. A challenge in higher education is that some academic models can be so discipline-specific that students miss out on cross-disciplinary opportunities to integrate their knowledge. But it doesn't have to work this way.

Like other colleges and universities that are innovating and experimenting, we are seeing returns on this curricular investment. One way to measure this: our survey of the Class of 2013 shows that 98 percent of responding graduates are employed or attending graduate school full time (this includes information from 95 percent of the class). Retention, number and availability of internships and repayment of student debt are also key metrics.

I encourage my higher education colleagues to refocus their attention on the ways we can work together to strengthen our education models. Millennials, a group that includes our current students, are counting on us to prepare them for successful careers and life. And in the long run, it is an economic imperative that we do so. ▪

Gloria Cordes Larson is president of Bentley University.

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