**Penn State 2025: Executive Committee**

**Background for Guiding Principle 3: Design Relevant and Responsive Programs**.

In 2025, Penn State will offer degrees and programs with learning outcomes defined by disciplinary communities and contemporary needs while also offering flexibility in achieving these outcomes via multiple pathways.

**Summary:**

(Copied from Principle 2 as there is some overlap) In *College Learning for the New Global Century*, a report by the National Leadership Council for LEAP and the AAC&U, the aims and outcomes of a twenty-first-century college education are explored alongside a survey from over 300 mid- to large employers of college graduates. Some highlights are as follows:

* The LEAP National Leadership Council recommends, in sum, an education that intentionally fosters, across multiple fields of study, wide-ranging knowledge of science, cultures, and society; high-level intellectual and practical skills; an active commitment to personal and social responsibility; and the demonstrated ability to apply learning to complex problems and challenges.
* The council further calls on educators to help students become “intentional learners” who focus, across ascending levels of study and diverse academic programs, on achieving the essential learning outcomes.
* The employer surveys and focus groups reveal strong support among employers for an increased emphasis on providing all students “essential learning outcomes” similar to those mentioned above. Employers reject any trend toward narrow techni­cal training at the college level; instead, they believe that, to succeed in the global economy, students need more liberal education, not less.
* Fully 63 percent of employers believe that too many recent college grad­uates do not have the skills they need to succeed in the global economy. Employers recognize the importance of higher education, but they see significant room for improvement in graduates’ levels of preparation.
* A majority of employers believe that only half or fewer recent graduates have the skills and knowledge needed to advance or be promoted in their companies.
* In none of twelve skills and areas of knowledge tested—from writing to global knowledge to ethical judgment—do a majority of employers rate recent graduates as “very well prepared.” Only eighteen percent of employers rate college graduates as “very well prepared” in the area of global knowledge. More than 45 percent rate them as “not well prepared” at all in this area.
* Fifty-six percent of employers think colleges and universities should focus on providing all students with both a well-rounded education—broad knowledge and skills that apply to a variety of fields—and knowledge and skills in a specific field (as opposed to broad knowledge only, or specific knowledge only approaches).
* The majority of employers surveyed think colleges and universities should also place more emphasis on helping students develop the ability to apply knowledge and skills to real-world settings through internships or other hands-on experiences. Several focus group participants were especially critical of colleges and universities for providing an education that is too theoretical and disconnected from the real world.
* In 2009 the survey was repeated in the face of the economic downturn. Again employers urged universities to examine their curriculums in the face of increased challenges in a face-paced, evolving work environment. Among the top skills requested by employers: the ability to effectively communicate orally and in writing (89%); critical thinking and analytical reasoning skills (81%); the ability to apply knowledge and skills to real-world settings through internships or other hands-on experiences (79%); the ability to analyze and solve complex problems (75%); and the ability to connect choices and actions to ethical decisions

(<https://secure.aacu.org/AACU/PDF/GlobalCentury_ExecSum_3.pdf>)

(<https://www.aacu.org/sites/default/files/files/LEAP/2009_EmployerSurvey.pdf>)

**How to bring about curricular change?**

To set the stage for a discussion on curricular change, we present this fairly academic case-study of a regional university undergoing changes in curricular processes. The study comprises a chapter (“A Responsive Higher Education Curriculum: Change and Disruptive Innovation”) in the book: *Innovations in Higher Education - Cases on Transforming and Advancing Practice* by Maureen Snow Andrade. Some salient points from the chapter include…

* Due to the changing landscape of higher education, and specifically the diverse populations of learners, as well as increasing competition from disruptive innovators such as for-profit and other educational providers, some traditional institutions are becoming disruptive innovators. Disruptive innovation is defined as follows: The process by which products and services, which at one point were so expensive, complicated, and inconvenient that only a small fraction of people could access them, become transformed into ones that are simpler, more convenient, lower in cost, and far more accessible
* An issue that impacts change in higher education is what some refer to as initiative fatigue—this occurs when various areas in the institution want to innovate, respond to needs, embrace opportunities, and contribute to student success. With multiple areas on campus striving to improve, enhance, and innovate, change can become too much to manage and end in frustration, or in compromise and incremental tweaking rather than true innovation. A first step, then, is to identify a true need or opportunity for change, determine how it will impact other initiatives, set priorities, and anticipate stakeholder reactions.
* In a study of 26 higher education institutions seeking to implement different types of change, those most successful at transformation were characterized as follows:
	+ Favorable external environments and internal conditions allowed institutions to create and control their futures in the face of outside pressure to change.
	+ Leaders upheld academic values, established trust, shared credit for success, and had a long-term perspective.
	+ Leaders understood the need for new practices, structures, and procedures and encouraged people to examine underlying assumptions of the status quo.
	+ Leaders made adjustments in their actions as they listened to stakeholders across the institution and learned from them
* Key areas for change addressed by the article were:
	+ *Program review…* Prior to the change, program reviews tended to focus on compliance and rarely resulted in change or curricular enhancements. It simply was not meaningful.
	+ *New Program Proposals…* There was minimal scrutiny of which programs should be prioritized; new programs were proposed throughout the year and approved as they were presented. Each proposal had budget implications—new faculty and staff positions, equipment, and office space. No one tracked what additional proposals were in the idea or development stage at the department level.
	+ *Curricular Process…* One of the most critical aspects of being responsive to workforce needs, specifically the ability to create new programs, was the curriculum approval process, which was thorough and lengthy prior to the change initiative. Based on the approval steps and the number of bodies which needed to approve new programs, it could take as long as 2 years for a program to be implemented. This was particularly problematic when local businesses approached the university to request training and certification programs and was also frustrating to faculty members who could not understand why the process was slow and entailed so many steps as well as cumbersome forms.
* The innovations described had the same underlying goal—to be responsive to employer needs by making curricular adjustments and developing new programs, thereby preparing students with knowledge, skills, and abilities for their careers. In the case of program review, data on employment demand as well as student learning outcomes was included, thus addressing this goal. The same was true of proposals for new programs—the change resulted in substantiating requests with evidence of demand. The curriculum approval process change aimed to enable the university to decrease bureaucracy, increase flexibility, and decrease time to implementation. All changes resulted in some level of success.
* Analysis and critique of the change process was guided by the Kotter and Cohen’s 8-step change process (https://www.managementstudyguide.com/kotters-8-step-model-of-change.htm) in order to determine what might have been done differently.
* A key finding of the report was, “The basic structure of higher education with its semester system, official annual catalog outlining policies and program offerings, software management systems for processes such as registration, curriculum, and scheduling, and accreditation standards is not designed to be nimble. All of these affected the changes in this case study. The people behind these systems have been trained to ensure that policies and standards are met and are not generally in a position to encourage or make sweeping changes. Those in higher level positions often do not have the detailed knowledge of systems and how they are designed, thus a gap exists that is difficult to overcome. The experts resist and say it cannot be done and the change agents or leaders do not have the technical knowledge to counter. This inhibits true innovation.”
* Although the changes discussed in this case resulted in subtle improvements, they fell short of true disruption or innovation due to the stability of traditional practices and culture. These hinder the university from fully meeting its mission as an open admission institution serving all students who enter its doors (e.g. a growing non-traditional student body, many of whom work full-time and are raising families as well as students with limited cultural capital), and ensuring that these students have a range of appropriate learning experiences that result in the knowledge, skills, and abilities needed by employers.

<https://www.intechopen.com/online-first/a-responsive-higher-education-curriculum-change-and-disruptive-innovation>

**Should we incorporate “Design Thinking?”**

Should the way we think about curricular change be itself changed? That is the questions that “Can Design Thinking Redesign Higher Ed?” (*The Chronicle of Higher Education*) asks. Author Lee Gardner highlights efforts by Stanford University to implement a design thinking approach to finding ways to encourage life-long learning. At its core, engaging in design thinking means retraining yourself to think differently, to break habits of mind and entertain possibilities you didn’t even realize you were shutting off. Some see it as a way to better engage a new generation of students, a tool to bring fresh thinking to colleges bound by tradition and inertia but operating in an increasingly volatile landscape.

It’s an interesting essay that discusses how we might approach innovation in this area.

<https://www.chronicle.com/article/Can-Design-Thinking-Redesign/241126>

A second, albeit earlier, article in *The Chronicle* explores the use of design-thinking consultants when redesigning Boston College’s core curriculum.

Motivation to undertake this approach stemmed from previous attempts to revise the core, which hadn’t changed since 1991. Earlier attempts stalled due to large inertial forces that resisted innovative change. Rather, faculty focused on preserving fiefdoms and protecting turf.

Universities have successfully used design-thinking processes to improve other areas, like facilities and marketing, so why not curriculum. Rather than starting with the topic of curricular change, consultants first engaged faculty in conversations focusing on the kinds of educational experiences they truly value. The key is to identify the experience the faculty want students to have, and then figure out how to make it happen. The process enabled the professors to watch the process unfold, articulate what they wanted students to get from their experience, and start building a curriculum to achieve those ends.

In all, faculty members acknowledge that team-taught, thematic, and interdisciplinary courses aren’t a radical innovation. The important thing for many professors, though, was not the final product. It was the process that arose. Professors from different departments were able to talk about the curriculum, exchange ideas about teaching, and come up with new courses. Remarked one faculty member, "It is an experiment and it might fail, but it’s worth trying because the very process of trying is putting people into conversation."

<https://www.chronicle.com/article/A-College-Turns-to-Design/229081>

**How will the changing landscape of higher education direct curriculum needs and goals?**

In the article, *The Changing Landscape of Higher Education*, David Staley (Ohio State) and Dennis Trinkle (Provost, Harrison College) discuss ten disruptors that are creating potential areas of dramatic change in higher education. A few topics that pertain to this theme include:

* *The Transformation of the General Education Curriculum*: Colleges and universities typically define general education in terms of content subjects: history, literature, sociology, the sciences, the arts. Indeed, the liberal arts are frequently held as the center of the core curriculum. Yet there is an emerging sense that general education should focus more on the key attributes that employers value as needed by a generally educated person: critical thinking, writing, speaking, arguing, researching, and mathematical reasoning. In addition to introducing a broad variety of subjects, general education should exercise skills and habits of mind.
* *The Changing "Traditional" Student*: Today, 'non-traditional' students are the majority of the student population in higher education. More than sixty percent of students enrolled are now over twenty-five and more than sixty percent of students are now working full-time while pursuing their education. This changed demographic signals the importance of speaking carefully about the type of educational institution and the particular student needs being addressed. We can no longer generalize from the base and traditional needs of students eighteen to twenty-three years old.
* *The Mounting Pressure to Demonstrate the Value Added of a College Degree*: Those at non-profit higher education institutions may find it easy to scoff at for-profits, but there are several indications that all institutions of higher education will begin to face scrutiny about "gainful employment" and the value of a degree in the marketplace. Students at traditional colleges and universities have also taken out sizable loans to complete their studies, and some are failing to land even entry-level jobs that match the skills they have trained for. Although this is as much a function of the recent recession, it nevertheless points to a rising trend: more "customers" of higher education are questioning the value of a college/university education. This leads to something of a contradiction: government and business leaders agree on the absolute criticality of more Americans attending college and gaining higher degrees, but simultaneously, Americans have less confidence that colleges and universities are preparing students well and providing good value.

Part of this reassessment of higher education will center on the value of a degree versus the value of other credentials, such as certificates. In a growing number of fields, a certificate is a perfectly sufficient credential for employment, especially in several "middle-skill" positions. Indeed, students may prefer to collect a succession of certificates over the course of their working lives rather than earn a degree at the start of their working lives. In this sense, higher education will increasingly consist of just-in-time training over a lifetime, a trend that will affect both admissions and alumni relations.
* *The Revaluation of "Middle-Skill" Jobs*: "Middle-skill" jobs are defined by the Bureau of Labor Statistics (BLS) as those between high-skill jobs, which require abstract reasoning or technical specialized knowledge, and low-skill jobs, which are found at the low-paying end of the service sector. In educational terms, middle-skill jobs require more than a high school diploma but not a full bachelor's degree. Middle-skill jobs are usually identified as those in the skilled trades—occupations that involve building, fixing, making. Some observers have argued that there has been a "hollowing out" of these middle-skill positions, with increasing demand for both high-skill and low-skill jobs, squeezing out the middle-skill trades. But BLS projections suggest that there will still be a demand for jobs at this middle level, especially as baby boomers retire.
* *Lifelong Partnerships with Students*: Students may seek certificates from a college or university early in their careers, earn a degree or advanced degrees later in their lives, and return periodically for short courses and other professional development opportunities throughout their careers. In effect, the student never leaves or matriculates: the student remains a part of the network of professional relationships that the institution represents. This is not just a metaphorical connection; it is an ongoing and active relationship. Students will pay a lifelong tuition fee to belong to this network and will receive what amounts to "service after the sale" after graduation.

<https://er.educause.edu/articles/2011/2/the-changing-landscape-of-higher-education>

**Survey on institutional learning goals**

From July 15 to October 13, 2015, Hart Research conducted an online survey among 325 Chief Academic Officers or designated representatives at AAC&U member institutions to explore how higher education institutions today are defining common learning outcomes and to document priorities and trends related to general education, equity, and emerging teaching practices.

Select findings from the survey about institutional approaches to general education design, learning outcomes, and teaching practices include:

* Nearly all AAC&U member institutions have a common set of learning outcomes for all their undergraduate students.
* There is significant agreement across AAC&U member institutions about the learning outcomes they have adopted for all students. These outcomes apply to a broad range of skills and knowledge areas.
* Although more AAC&U member institutions have common learning outcomes for all students today than they did in 2008, educational leaders report that *students do not have a greater understanding of these goals than they did seven years ago*. (emphasis added)
* Many institutions are implementing evidence-based practices to advance student success, and they are most likely to require high-impact interventions that support the successful transition to college.
* Though most AAC&U member institutions offer significant learning projects for at least some students, fewer actually require all of their students to participate in these types of projects.
* Only a limited number of institutions require the use of electronic portfolios, although there has been a slight uptick in the proportion of those that do in the past seven years.
* Most AAC&U member leaders think some faculty at their institution are using available digital learning tools effectively, but they indicate room for their campuses to expand the effective use of digital learning tools.
* General education redesign is growing as a priority, and administrators now are more likely than in 2008 to report an emphasis on the integration of knowledge, skills, and applications in the program.
* Compared with 2008, administrators today are more likely to say their institutions’ general education programs have “clear learning outcomes” and “assess student achievement of learning outcomes.”
* Many AAC&U member institutions include global courses and first-year seminars in their general education programs, but fewer than two in five require experiential learning practices.
* AAC&U member institutions are as likely to use the distribution model for their general education programs today as in the past, though nearly all use other integrative features in combination with a distribution model.
* Although member institutions today are more confident that their general education programs are well integrated with students’ major requirements than they were in 2008, there still is room to better link general education programs to majors.

<https://www.aacu.org/sites/default/files/files/LEAP/2015_Survey_Report2_GEtrends.pdf>

**Disciplinary Communities Learning Goals**

Beginning in 2013, the Measuring College Learning Project (MCL) was initiated by the Social Science Research Council. an opportunity to engage faculty and the broader higher education community in an effort to develop tools to understand and improve discipline-specific student learning. Faculty are often absent in policy debates about student learning, and most current attempts to articulate and demonstrate learning have focused on generic competencies, not discipline-specific learning that occurs in students’ majors. In the MCL project, faculty and other experts have come together to consider what students should learn in their majors and how that learning should be measured.

In *A Faculty Stand on Assessment*, authors Josipa Roksa and Richard Arum describe the outcome of the MCL Project. Key findings include:

* Faculty members in six disciplines -- biology, business, communication, economics, history and sociology -- engaged in invigorating discussions, lively debates and difficult conversations. Supported by their disciplinary associations and encouraged by their collaborative spirit, they have articulated frameworks for defining learning outcomes in six disciplines and the principles for assessing learning outcomes in the 21st century.
* Faculty members readily agreed that higher education is not about efficient acquisition of surface content knowledge and the simple regurgitation of memorized facts. That does not mean that content is unimportant. Content is indeed crucial, but primarily as a building block for more complex forms of thinking. Faculty members are eager to get students to apply, analyze and evaluate from their disciplinary perspectives, to acquire a disciplinary mindset and think like a biologist or an economist.
* Faculty members across disciplines in the MCL project rather quickly coalesced around “essential concepts and competencies” for their disciplines, which represent ideas and skills that faculty believe are fundamental to the discipline, valuable to students and worth emphasizing given limited time and resources. There are similarities across disciplines including an emphasis on analytical writing and problem-solving, but these generic skills take form, are defined and are honed within specific fields of study.
* Faculty members are also often seen as resisting assessment. But, in fact, they resist, as would all other professions, externally imposed mandates that fail to reflect the complexity of their jobs or that misrepresent the purpose of higher education. They also believe that what they are doing makes a difference -- that they are teaching students how to see the world in a new light -- and they would be eager to have the tools to demonstrate their contributions to the development of student cognitive capacities.
* The faculty should be at the forefront of the conversations about the purposes of higher education and thus at the center of defining and measuring undergraduate learning outcomes. That is not only a matter of professional duty but also of doing justice to their students.
* The authors questioned the utilization of transcripts by employers, citing research that shows most employers do not even ask to see them. And while some recent efforts have aimed to add extracurricular activities and other accomplishments to college transcripts, none of those tell us what students actually know or can do. Taking a class is not the same thing as mastering the concepts and competencies presented. Being a member of a club similarly says little about the skills a student has developed.

<https://www.insidehighered.com/views/2016/06/01/defining-disciplinary-learning-outcomes-and-principles-assessment-essay>

*Editor’s Note: Does the wording of this theme push us to be more siloed? Should individual disciplinary communities each develop their own learning outcomes, or is a more integrated, interdisciplinary approach needed?*

In the article “Can teacher collaboration overcome barriers to interdisciplinary learning in a disciplinary university? A case study using climate change,” (*Teaching in Higher Education*, Pharo et. al., 2012) the authors describe an attempt at an interdisciplinary approach to student learning.

Abstract:

A teacher network was formed at an Australian university in order to better promote interdisciplinary student learning on the complex social-environmental problem of climate change. Rather than leaving it to students to piece together disciplinary responses, eight teaching academics collaborated on the task of exposing students to different types of knowledge in a way that was more than the summing of disciplinary parts. With a part-time network facilitator providing cohesion, network members were able to teach into each other's classes, and share material and student activities across a range of units that included business, zoology, marine science, geography and education. Participants reported that the most positive aspects of the project were the collegiality and support for teaching innovation provided by peers.

However, participants also reported being time-poor and overworked. Maintaining the collaboration beyond the initial one year project proved difficult because without funding for the network facilitator, participants were unable to dedicate the time required to meet and collaborate on shared activities. In order to strengthen teacher collaboration in a university whose administrative structures are predominantly discipline-based, there is need for recognition of the benefits of interdisciplinary learning to be matched by recognition of the need for financial and other resources to support collaborative teaching initiatives.

<https://srhe.tandfonline.com/doi/abs/10.1080/13562517.2012.658560#.XSjWWY97k2w>

**Is our curriculum culturally responsive?**

The term “responsive curriculum” not only applies to courses and programs that are in-line with employer needs. Expanding learner populations dictate that we consider curriculum which is culturally inclusive to a world-wide audience. The library guide, *Culturally Responsive & Inclusive Curriculum Resources: What is Culturally Responsive Curriculum?* (Bob Schroeder and Kim Pendell, Portland State University) explores ideas relating to thinking about and creating Culturally Responsive & Inclusive Curriculum.

The guide prompts faculty to consider such questions as: “How does my pedagogy reflect intentional efforts to engage diverse and/or underrepresented populations?” and “How does my curriculum acknowledge various perspectives and/or voids within the field?” Ultimately, the purpose for consideration of such questions is so that our courses and programs better reflect a diversity of voice.

<https://guides.library.pdx.edu/c.php?g=527355&p=3623937>

**What role might alternative credentials play?**

In the article, Alternative Credentials: New Ways to Certify Learning, author David Schejbal discusses current trends in alternative credentialing in higher education. Key points include:

* Due to significantly extended life expectancy, people engage in higher education differently than they did in, say, the 1950s. Daniel Yankelovich in a 2005 article in the *Chronicle* predicted that, “We are rapidly moving away from the rigid sequencing and separation of schooling and jobs toward a new pattern in which higher education spreads out over about a 12-year period and is more closely integrated with work. This is not just prolonged adolescence. It is in many ways a new phase of life, in which young people experiment with relationships and career choices to find the best fit with their practical needs and with their self-expressive goals.”
* At the other end of the working-age spectrum are adults in the 55-75 age range. Some people in this category are early retirees; others are career changers looking for more meaning in their lives, but both groups seek more education to meet their needs.
* One serious challenge to increasing educational attainment in the U.S. is the higher education credential itself, i.e., the degree. At best, it is a very blunt instrument that signifies in very general terms disciplinary knowledge and skill. At worst, it is a document noting only that the holder spent time in college, but provides no information at all about what the holder actually knows and can do. Even in the best circumstances, however, degrees are expensive in both time and money, and they meet the needs of only a fraction of the population that requires more knowledge and skills to remain gainfully employed.
* today a whole array of not-for-profit and for-profit providers offer credentials in nearly every discipline or skill. Yet no credential other than a degree has gained wide acceptance, and very few non-degree credentials are transportable across employers or employment sectors. Thus there is a disconnect between what is needed in the market and what is offered. One thing missing to enable the gap to be filled is a structure or framework that enables recognition of and trust in new types of credentials.
* Although the “credit-hour” is a standard unit of learning among accredited programs. However, credit hours to not translate well to non-accredited programs. Second, and more importantly, as the term implies, the credit-hour is a measure of time spent learning; it is not an indication of what a student knows or can do with whatever knowledge she has. Put differently, the credit-hour is a measure of inputs into learning; it is not a measure of outputs, and what most employers want is a clear indication of what students know and can do. Grades are not accurate indicators as well. Although grades are supposed to objectively reflect learning, it is hard to reconcile today’s grades with the research suggesting poor learning outcomes are widespread. Almost half of all undergraduate-course grades are A’s (in 1961, only 15 percent of grades were A’s).
* A potentially more useful indicator of knowledge and learning is that of competencies. Competencies denote what students know and can do with the knowledge they have. Competencies are understood both in industry and academia and can be applied in multiple contexts, making them a powerful unifying way to examine credentials.
* Lifelong learning is no longer a euphemism for learning in retirement; it has become a necessity for gainful employment. Many jobs require higher education knowledge and skills, and increasingly employers want evidence that applicants know how to use what they learn in applied, direct ways. Degrees continue to be important markers of educational attainment, but they are expensive in both time and money, and they don’t meet the needs of those who want to learn a specific skill or knowledge set to apply to a new or existing job. Furthermore, there are many individuals who have degrees but need more advanced knowledge and skills outside of the traditional degree process.

<https://unbound.upcea.edu/innovation/alternative-credentialing/alternative-credentials-new-ways-to-certify-learning/>

Does this mean that alternative credentials will overwhelm the market space? Not so fast! There is still much debate on the beleaguered “credit-hour” In an article titled, *Colleges Re-Bound?* (Inside Higher Ed), Chris Gallagher outlines some of the pitfalls of “Entrepreneurial” sources of alternative credentials (and the notion that they will replace degrees from accredited institutions). Instead Gallagher advocated for the expansion of educational opportunities, rather than a replacement of traditional models.

* Gallagher notes, “We need high-quality educational and training options for those who truly don’t want degrees. But such options cannot replace degrees, and we should not use them as an excuse to ignore the social and economic inequities that make us believe that we know who the deserving are in the first place or that “desiring” a college degree is a purely personal and unfettered choice. Our goal should be to expand access to high-quality degrees and alternative credentials to as many learners as possible -- ideally in ways that promote the integration of learning across a variety of lifelong learning experiences and credentials.”
* Universities are beginning to envision personalized, flexible, lifelong educational experiences and services. In one sense, these future universities are “unbundled”: they involve suites of credentials and microcredentials alongside degrees. But at a deeper level, they are rebundled institutions, redesigned to integrate degree and nondegree learning experiences and credentials to help learners author their own coherent, integrated learning journeys.
* The colleges and universities of the future will continue to offer degrees, but they will be innovative and flexible enough to offer a variety of learning experiences and credentials when learners need them in formats those learners can fit into their busy lives. They will be responsible and credible enough to offer degree and nondegree credentials, perhaps in partnership with other institutional and noninstitutional providers, that learners and employers can trust. And they will be coherent and bundled enough to enter into lifelong relationships with learners, devoting their people and their technologies to guiding them on their integrative lifelong-learning journeys.

<https://www.insidehighered.com/views/2018/06/13/alternative-credentials-create-social-and-economic-inequities-and-shouldnt-be-seen>