Supporting Learner Success: Closing the Skills Gap Between Academe and Industry

A decade of innovation at the University of Phoenix

By Eve Krahe Billings, PhD, Mary Elizabeth Smith, Hillary Halpern, and Doris Savron

Scanning the environment

When discussing recent trends in higher education, many in the sector quickly go to what could be considered two divergent eras of existence: before COVID-19 and after COVID-19. According to PwC and others in what are considered the Big Five consulting firms, initially the difference in these two eras was primarily digital – i.e., how much of an institution's existence could (or did) go online during the pandemic and the degree of agility inherent in that move. It is evident, however, that there were troubled spots in higher education well before COVID (Friedman, S. Hurley, T., Fishman, T., & Fritz, P., 2022).

Concurrently, the workforce market was shifting toward recognizing skills, as well as opportunity gaps for workers, which was then accelerated by the pandemic (Moritz & Frei, 2022). These assertions in the research are echoed in the results of the University of Phoenix Career Institute® _Career Optimism Index_® study over the last three years. Employers of all types are beginning to value how skills can be obtained in academic settings and elsewhere (Ganapathy et al., 2020).

From Boggs and colleagues' (2021) suggestion that higher education institutions "establish a data-driven organizational baseline" and "create a sense of urgency," to the importance the group places on a board of trustees who are well-grounded in "current higher education trends," those outside higher education have been encouraging a more trend savvy, corporate focus on how institutions are run. As the

saturated higher education market continues to grow, learners expect seamless, meaningful, and eye-catching hybrid or online education that leads to tangible results (Child, Frank, Law, & Sarakatsannis, 2023). Differentiation is increasingly difficult, and there are less traditional prospective students across the higher education sector (National Student Clearinghouse, 2022).

Focusing simultaneously on the centrality of its academic offerings and strong faculty culture while maintaining the agility of its supporting corporate structure, the University of Phoenix is strategically positioned to succeed. Aligned with McKinsey's guidance to focus on data, the University knows a lot about its students and continues to refine data strategies to uncover more.

Approximately 60% of the University's students are first generation college students, and on average 38 years of age (University of Phoenix *Academic Annual Report*, 2022). Eighty percent report they are employed and 63% have dependents at home (University of Phoenix *Academic Annual Report*, 2022). The University recognizes these students have unique needs related to academic offerings and support during their studies.

Although a smaller pool of what many consider "traditional" prospective higher education students (first time in college; aged 18-25) exists, statistics show that the adult learner population (returning to college; over aged 25; employed; caring for dependents) is growing. University of Phoenix is maintaining its market differentiation in higher education for two reasons: first, because the institution was founded upon serving adult learners while other institutions are now trying to gain market share and footing with this demographic, and second, in the past decade, the University has undertaken a constellation of innovative academic initiatives that are driving its continued transformation in the service of these adult learners.

University of Phoenix was established with the intent to help working adults earn a college education no matter their age, demographic, or work situation. To deliver on this mission, people, purpose, and processes must align across the University. This begins with the core offerings, our academic programs: associate's, bachelor's, master's and doctoral degrees, as well as our market-driven certificates and professional development offerings; helping prepare our working adult students to be successful and make an impact in their communities.

Today, University of Phoenix carries forward that legacy and mission, offering high quality academic programs that educationally prepare our students for success. Described below are specific instances of innovation illustrating the University's commitment to its mission over the last decade.

2012 – Future-proofing academic program design

The University Program Lifecycle (UPL) was established more than a decade ago, in 2012, at University of Phoenix as a way to maintain the University's focus on rigorous and meaningful, market-benchmarked academic offerings for students that were aligned to real-world opportunities. This vision for a valid and thoughtful academic portfolio was a major milestone on the journey to fulfill the University's mission as the higher education environment around us continued to change. The UPL operates under the authority of the provost and academic leadership; its intent is to maintain a sustainable and systematic approach

to effectively and efficiently designing and maintaining academic programs with an eye to learner needs and currency in academic disciplines and industry sectors.

Over the past decade, UPL has coordinated stakeholders across multiple functional areas ranging from academic program leadership to advising, financial aid, and accreditation in consistently improving resources and support for University of Phoenix students and academic programming in over 100 different work processes across the institution. This ensures that the University's portfolio of academic programs is managed responsibly and in compliance with external standards and requirements.

University Program Lifecycle

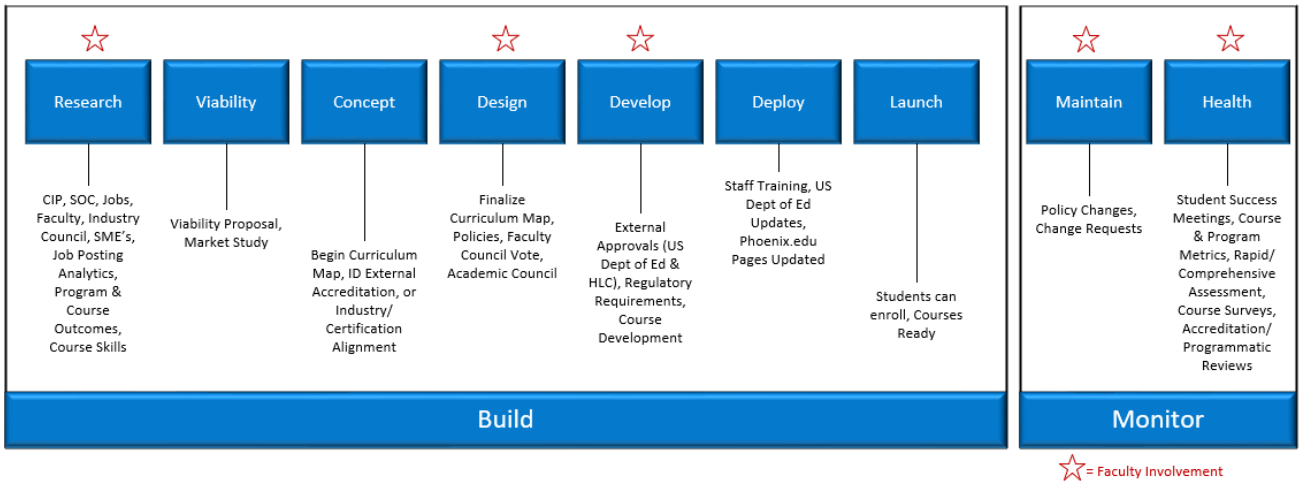| Research	Viability	Concept	Design	Develop	Deploy	Launch		Maintain	Health
CIP, SOC, Jobs, Faculty, Industry Council, SME's, Job Posting Analytics, Program & Course Outcomes, Course Skills	Viability Proposal, Market Study	Begin Curriculum Map, ID External Accreditation, or Industry/ Certification Alignment	Finalize Curriculum Map, Policies, Faculty Council Vote, Academic Council	External Approvals (US Dept of Ed & HLC), Regulatory Requirements, Course Development	Staff Training, US Dept of Ed Updates, Phoenix.edu Pages Updated	Students can enroll, Courses Ready		Policy Changes, Change Requests	Student Success Meetings, Course & Program Metrics, Rapid/ Comprehensive Assessment, Course Surveys, Accreditation/ Programmatic Reviews
Build								**Monitor**	

☆ = Faculty Involvement

Figure 1- Representation of the phases of the University Program Lifecycle.

The UPL process provides a lens into the intersection of academic program design and delivery, external regulations and standards, and extensive market research, across industries and in the higher education sector, balanced with the internal needs, academic freedom and operational complexities that come with being an academic institution. Federal regulations and policy provide clear boundaries for UPL ensuring alignment of all institutional stakeholders in support of high-quality academic programming.

Importantly, this orchestration of academic and operational processes has provided a solid foundation for extensive innovation, including empowerment of a nimble and research-based academic vision across disciplines, thought leadership related to coordinating complex university processes and, most recently, contributing to the University's market differentiation via skills-aligned learning, described below.

The University Program Lifecycle process has played a key role in the University's decades-long commitment to offer rigorous academic experiences that align to industry needs due to its ability to audit and report out on the current state of the US Department of Education's Classification of Instructional Programs and monitor job data from the Bureau of Labor Statistics as these relate to academic programming vis-à-vis growing industry sectors and in-demand jobs. The team dives deeper into these data, also watching closely the Standard Occupational Classification (SOC) categories that are frequently updated. These occupations are aligned to existing job titles by academic program leadership,

providing a "fingerprint" for each program offering and outcome, this includes credential level and experience necessary to obtain the job.

All these insights are then fed back to teams across the University who curate content, develop professional resources, provide career guidance, and support students even after graduation in finding a new career or driving forward on their current career path. These longstanding processes were formalized in the University's Career Services for Life® commitment, described further below.

2015 – Cultivating sector relationships: Industry Advisory Councils

The literature demonstrates that industry advisory councils are an effective way to accomplish the requisite alignment between industry and academic preparation (Bremner, Meehan, Liu, & Liu, 2016; Meeder & Pawlowski, 2012; Dorazio, 1996). Advisory councils are well-documented in disciplines such as general business, executive education, engineering, and even in library science. At the University of Phoenix, insights from the literature on executive education advisory councils are particularly useful – as the University's student population is statistically older, more experienced professionally, often already employed, and wanting coursework to tie to current or future job issues and insights.

The University's uses of industry advisory councils have proved an effective means of quickly translating dynamic industry trends to academic learning. The University continues to utilize interdisciplinary advisory councils, usually convened each year by the Dean, academic staff, and select faculty members. Throughout the year the Dean is responsible for communication with the council members, providing updates and seeking insights that are then discussed with faculty.

College deans, program directors, faculty, and instructional design teams work together to create a highly responsive curriculum design model by actively involving advisory council members in this design. The work occurs inside of several feedback loops, encouraging continuous quality improvement. Current faculty act as mentors to council members, socializing them to the effective dissemination of industry knowledge in an academic setting. Designers act as mentors to both parties, translating knowledge into course material grounded in best practices in andragogy. For example, instructional designers will perform impromptu, content-focused interviews with council members, and with members' permission these are used in courses to supply "day in the life" content for learners. The feedback loop continues, with council members mentoring designers regarding the unique real-world deliverables that signal competency across the industry, the demonstration of which is required of learners so that they can be successful in their jobs.

2020 - Mapping curriculum: skills-aligned learning

There are resounding calls nationally and internationally for a stronger, more meaningful connection between education and careers (Capranos & Magda, 2023), and the voice of the learner is perhaps loudest among them (Wallenstein, 2023). From international conversations at the World Economic Forum to our industry partnerships here at University of Phoenix and, most importantly, what we have

learned from our own students about their needs, we have heard and are answering that call (Krahe Billings, 2023).

Our definition of skills is informed by programmatic accreditors across disciplines as well as those of Lightcast, a leading labor analytics company and creator of the Open Skills Taxonomy, and the World Economic Forum (WEO). For Lightcast, a skill is a "knowledge, experience, ability or tool needed to do a certain job or work-related task" (Lightcast, 2022). For the WEO, skills and knowledge are two discrete things: "Skills are the capabilities needed to complete a task, and therefore a job. Knowledge is the body of facts, principles and theories that are related to a field of work or study, and that can be further split into dependent knowledge (practical and procedural) and context- independent or theoretical knowledge" (World Economic Forum, 2021).

As an institution of higher learning for adult learners, University of Phoenix balances the traditional rigors of academic socialization with these job-focused definitions. Our expectation of the University graduates is that they demonstrate skills indicative of the comportment, critical thinking, and academic citizenship of any higher education student. Add to this the skills necessary for employment or career growth in an industry sector, and our model is a powerful differentiator for our students.

Three years ago, University of Phoenix made a commitment to an innovative skills-tagged curriculum model to meet working adult learners' need to demonstrate skills attainment for workplace relevancy. Currently, 100 percent of associate, bachelor's and master's degree programs open for new enrollment are fully skills mapped.
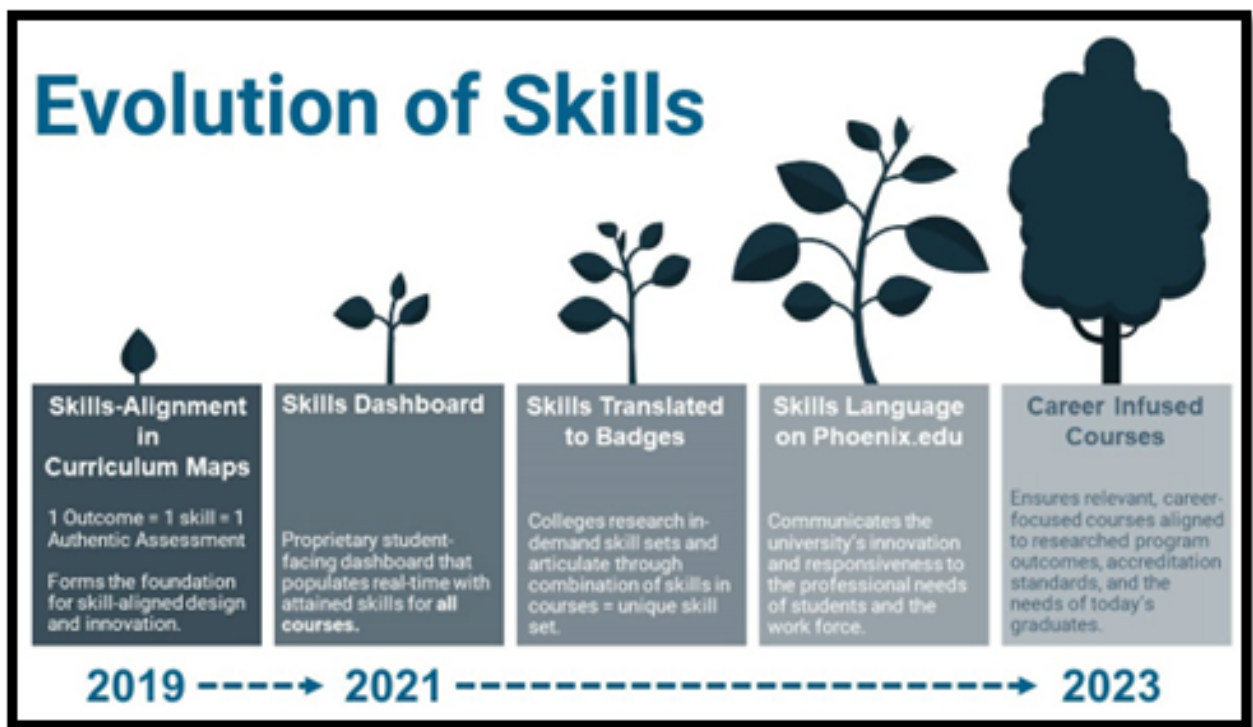

Figure 2 - Evolution of the development and deployment of a skill-aligned curriculum.

The progress of University of Phoenix in skills alignment is at the forefront of efforts to close the skills gap and highlight how learners are acquiring skills as part of their progress, which can create opportunities for upward career mobility. The University continues its foundational work building programs on relevant skills and empowers learners and job seekers in what is anticipated to be a new era of skills-based hiring.

University of Phoenix approaches the mapping of skills within the curriculum as fostering equity and empowering students' career mobility. Programs' academic leadership takes into consideration programmatic accreditor guidelines, advisory council insights, labor market research, employer needs, and faculty expertise – integrating the academic vision and industry focus, to identify, tag, and map sought-after skills in courses.

The University builds degrees using in-demand skills and aligns individual courses to skills that are career-relevant to a program's respective discipline and industry. Measuring learner attainment of skills are embedded authentic assessments (described in depth below) that are tracked to a proprietary University of Phoenix student dashboard, allowing students to see skills acquired as part of their progress.

The University has also implemented an Academic Competencies Management Tool (ACMT), that captures all University of Phoenix skills and skills descriptors linked to courses, programs, badges, accreditor standards, etc. to scale new design and articulate the skills students are learning and skills' value to the employer. The program blueprint cross walks labor analytics, in-demand and career-relevant skills, Industry Advisory Council insights, faculty council and workgroup deliverables, employer input, programmatic standards, and learning goals in programs. This enables academic leadership to work closely with faculty and instructional designers to build clear connections in courses and academically-sound, industry relevant authentic assessments.

2021 - Authentic assessment

At University of Phoenix, Authentic Assessment is the primary mechanism for measuring learner outcomes within our skills aligned curricula. This way of designing and scoring assessments provides a clear lens and research-based framework through which a learner can be observed attaining a skill. Skills are not icing on a cake, overlaid after curriculum has been designed and assessments created. Instead, they are deeply embedded in curricular content and in learning outcomes during the design process, as illustrated below. Skills are present at the undergraduate and graduate level in a 1:1 ratio across course outcome, to assessment to skill to credit. This means students, faculty and academic leaders have a clear line of sight to student attainment of a skill and where that attainment is occurring in a course. (Reflective of newer students' needs, general education courses are designed in a more holistic way, with skills integrated across several assessments within a course.)
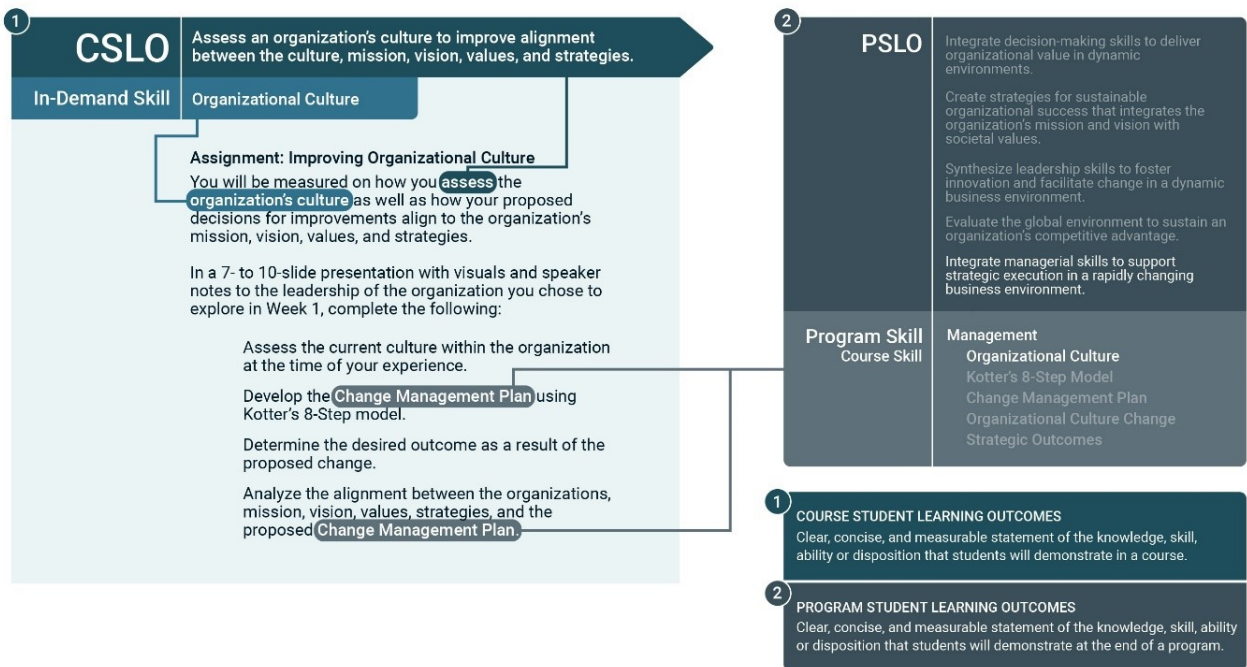
Figure 3 - Diagram of alignments between Program Student Learning Outcome (PSLO), Course Student Learning Outcome (CSLO) and skill

Authentic Assessment at the institution is aligned with the seminal assertions of Wiggins (1993), Suske (2018), Banta and Paloma (2015), and Wiggins and McTighe (2005): assessments are real-world, relevant, and context rich. They align tightly to the learner's academic or practice discipline, and require demonstration of foundational knowledge, skills, and abilities within that discipline.

Authentic Assessment design poses shifting scenarios that challenge learners, empowers learners to interpret the assessment in their own context, and provides opportunities for students to engage with faculty and peers in understanding the assessment. Resources are provided that support the learner in understanding the deliverable. These assessment deliverables are expected to be novel, necessarily different across learners, they lend themselves to detailed feedback from faculty and/or peers that is reflected in rubric design and language, and they are direct evidence of the skill the learner has attained.

Figure 4 - Authentic assessment strategy used to measure course learning outcomes that are mapped to skills.

The Assessment and Institutional Research Team deliberately refers to these deliverables as "assessments" rather than "assignments." Echoing Wiggins and McTighe (2005) this allows us to frame the requisite mindset for learners and faculty: digesting the context, making meaning, and producing something novel.

2021 – Growing a system of lifelong career support for students and alumni

University of Phoenix has over one million alumni and has created a system of career support for working adult students to build career confidence across their educational journey, as part of its Career Services for Life® commitment. This system of career services begins with a discovery phase, inviting students to explore career interest assessments, article and content featuring industry and expert insights on careers and related fields of study, career workshops. The career support then continues into learning that closes skills gaps, with a network of peers and practitioner faculty and authentic skill assessments offered through coursework. Students and alumni can access a suite of support resources including career advisors, resume building, interview preparation, personal brand development, job search tools, salary negotiation advice, and networking and mentoring.

University of Phoenix has practitioner focused research centers in organizational leadership, technology and education, and workforce diversity housed in its College of Doctoral Studies, and in 2021, established the University of Phoenix Career Institute®, a center created to address broad, persistent and systemic barriers to career advancement through research-based solutions and impactful partnerships that break down barriers Americans face in their careers. The Institute launched the Career

Optimism Index® study that same year to discover more about American workers' attitudes toward work and career advancement, both in context of the pandemic, and continuing forward on an annual basis. University of Phoenix is working with partners such as Jobs for the Future to offer employers the insights and action-oriented strategies which can be adopted within workforce systems to address those gaps and create the necessary conditions for equitable career and economic advancement.

2021 – CIP and SOC job titles to feed career services

As described above, the University Program Lifecycle team has been monitoring the Classification of Instructional Programs (CIP) and Standard Occupational Classification (SOC) codes of the Bureau of Labor Statistics for over a decade. In 2021, in keeping with the University's skills-alignment differentiation, the CIP, standard occupational code, and job details related to each program began feeding throughout the entire university ecosystem and career tools. This ensures that students/prospective students are able to see if and how their career/job goals relate to their education. This broad filtering of these details provides historical data and future projections on education requirements, salary data, and experience levels to help students make the best choice for themselves and their families and understand their potential career pathways.

2021 – Competency Based Education

Recognizing that some learners desire a more direct different pathway to obtain their degree, the University began offering select degrees in a competency-based education (CBE) delivery model. Decisions about which degrees to offer were made after extensive higher education market research, and by using a close critical look at CIP/SOC and job titles, as well as labor analytics. The CBE model is designed for a student that already has knowledge about the discipline they want to pursue their degree in, which is typically acquired from work or prior academic experience.

The CBE programs leverage the same baseline curriculum used in the standard program learning model but provide a way for students to accelerate their pace for a degree through leveraging a more flexible way to consume content and complete assessments. Thanks to the deep work of mapping skills to an authentic assessment across curricula, the translation of the curriculum to a competency-based model was seamless given the overall learning outcomes were mirrored. Now students can earn a graduate degree in less than a year. Over 1,500 students have graduated from the CBE programs.

This initiative was significant for the University as it allowed us to enter the market with a data-driven degree program while responding quickly to learner requests. These initial CBE programs provided a foundation to begin expanding degree pathways including a recent foray into direct assessment CBE delivery models.

2021 - Giving students the language to articulate what they have learned

The University is focused on empowering current students as well as our alumni with language to describe their academic experience that is equally compelling to current and potential employers. From our ability to determine the validity and viability of a degree itself to the mapping of our curriculum to current skills and authentic assessments that showcase attainment of these skills, the University has prided itself on sharing this clarity of vision with students.

THE SKILLS-MAPPING JOURNEY

1. We work with labor market analysts to evaluate thousands of job posts to **identify skills** today's employers want in job candidates.

2. We ensure that those **skills are embedded** in our programs.

3. We align **credits to skills in a 1:1 ratio** across required courses of study. This means, on average, for every three-credit core course a student takes, the student can demonstrate three career-relevant skills.*

4. We assess students with real-world **assignments tied to those skills.**

5. We help students **keep track of skills** they have demonstrated through a personalized skills profile.

6. We award students with **badges they've earned for the skills** they demonstrate. This helps them showcase their skills right away.

*Throughout our general education curriculum, skills are aligned at the course level rather than at the credit level.
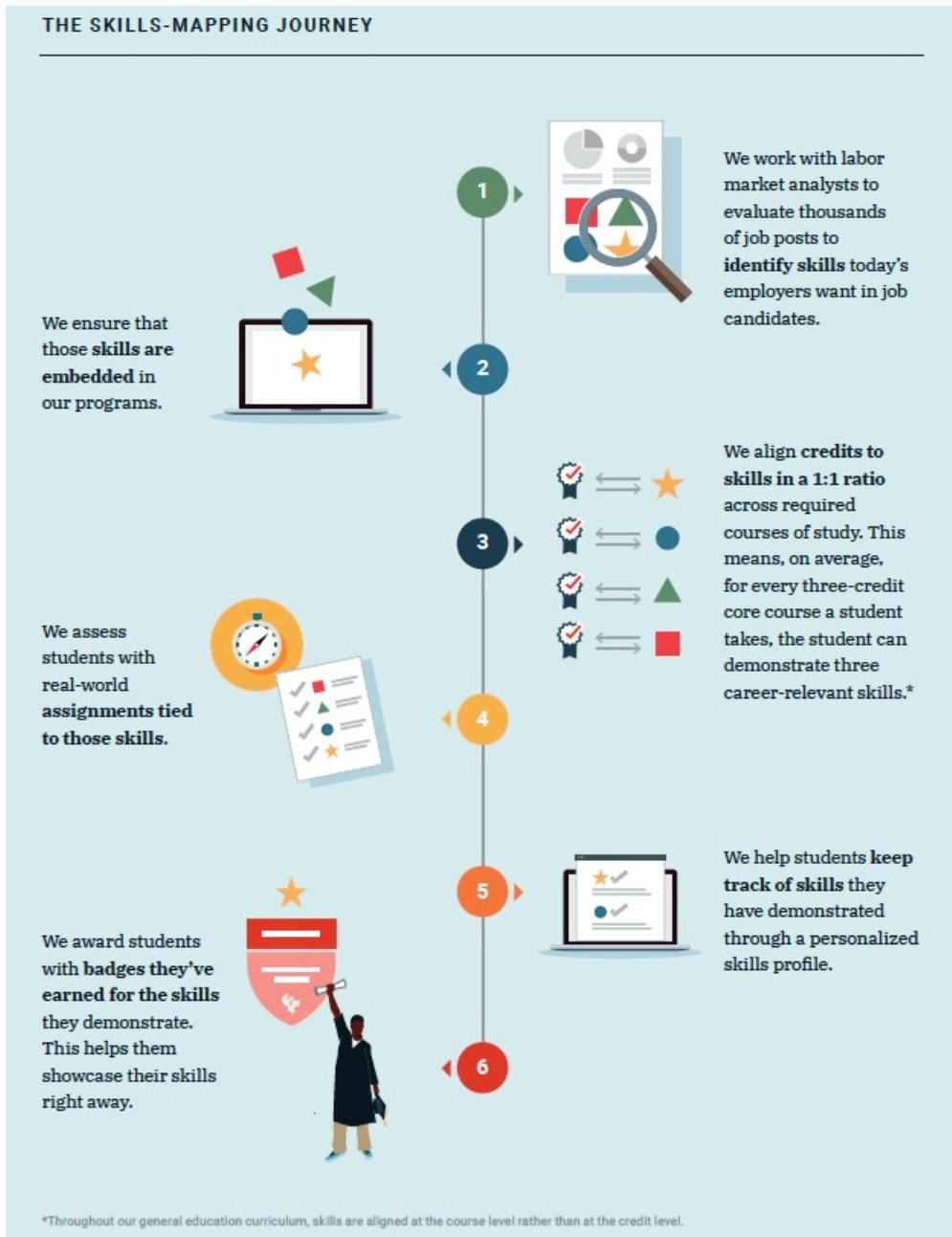
Figure 5 - The Skills-Mapping Journey

2021 - Learning design to support a career-centric learning experience

While the university has expended great effort in designing and launching skills-aligned curriculum that addresses academic socialization and industry alignment, the next step has been situating the skill-focus within a strong learning design framework grounded in best practice in instructional design.

"Curriculum 2.0," is an initiative being piloted in select academic programs by academic leadership, faculty, and instructional designers, using best practice in learning design to maintain academic rigor and differentiate the delivery of the University's career-centric approach, immersing learners in an academically sound, career-centric learning experience.

In addition to supporting best practice in adult learning in a higher education context, the strategies elevate the awareness of and contextualization of career situations and the skills these represent. The design vision was generated from analyses that used student demographic data to identify a student persona that was then personalized and utilized by instructional designers and academic leaders.

Figure 6 - Using a student persona to set the vision for a curriculum innovation.

The initiative supports clarity for learners in understanding the alignment of skill and authentic assessment. It provides a means for learners to use the skill language in describing what they know or what they can do, with evidence provided by the assessment.
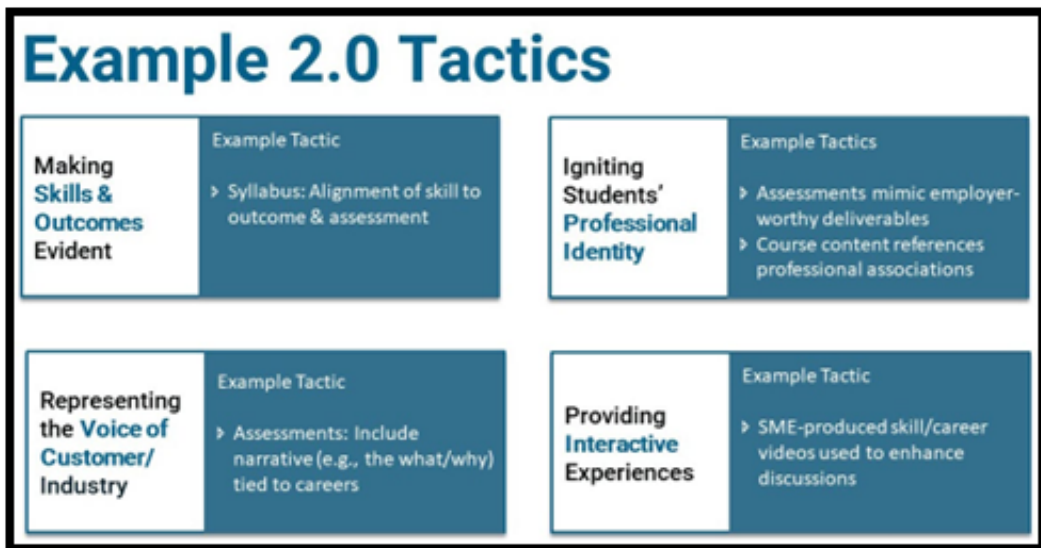
Figure 7 - Example of some of the tactics used to elevate the career-centric course experience.

The implementation of this wholistic and innovative strategy not only supports a meaningful student experience, but also puts the elements of the skills-aligned curriculum map at the forefront of the student experience. The pilot has delivered compelling data that will provide a foundation for forward movement in this area.

2021 – Digital badging

As mentioned above, the University has issued over 380,000 badges since September 2021, for single or combinations of skills obtained in select undergraduate, graduate, and professional development courses.

The University wants students who are beginning their academic journey to have tangible evidence, feel empowered by their progress, and comfortable sharing those career-relevant skills early in their education journey. Students use their proprietary learner dashboard to track their skills and can claim any related digital badges using a University of Phoenix specific portal to the Credly platform, to display skills across multiple platforms including resumes, social media, and digital platforms, as proof of learning for potential employers, current employers, and colleagues.
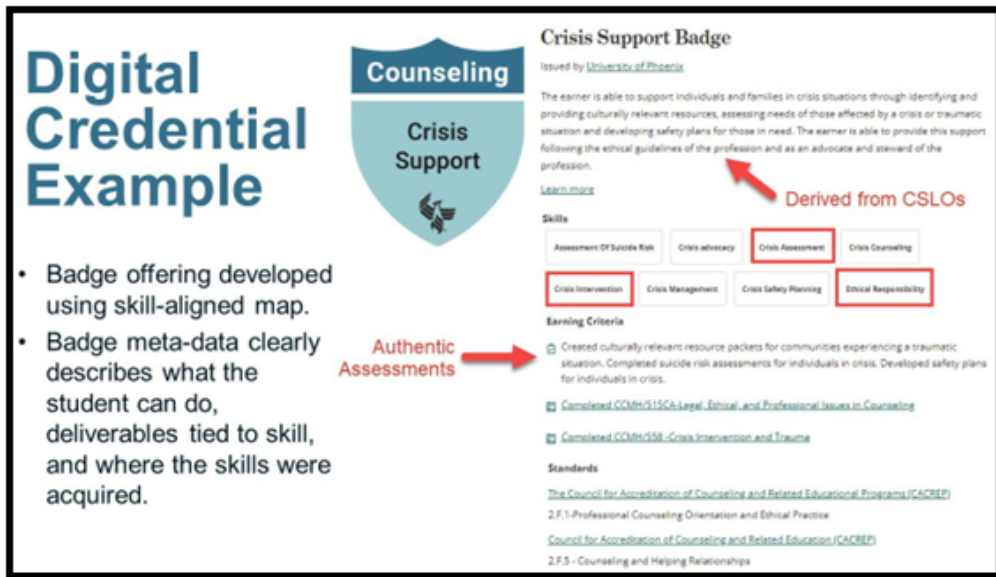
Figure 8 - The Crisis Support digital badge offering leverages the skill-aligned curriculum map.

Student voices are critical and made part of the UOPX development process. Insights from student surveys and focus groups garnered some of the following insights that have informed that development:

- 76% understood professional benefit
- 64% believe badging will help with advancing careers
- 68% worked harder in course because of the ability to earn a badge
- 75% believe it will be easier to communicate their skills to potential employer
- 73% are eager to start next course because of badges
- 81% have a strong desire to complete their program because of badges
- 27% want to share badge, but don't know how
- 11% won't share because no need for it in their current position

2022 – Elevating learner voice to improve curriculum and experience

Designing and refining a modern learning experience requires input from students so that meaningful action can occur to increase the value of their investment, their education. We construct scalable strategy to ensure that the University is continually investigating how to deploy value to students quickly. Innovating means that not only do we look for ways to do things better, but we also look for ways to leverage technology, improve efficiency, embrace new ideas, in addition to listening to the voice of the customer.

The Learning Experience Team in the University's Center for Teaching and Learning gathers student insights through embedded course surveys within the LMS using Qualtrics, interviewing students through UserZoomGo, which allows for observation by others, hosting focus groups, and developing

program-level student journey maps so that pain points and moments of delight can be identified. A recent learning innovation discovery project focused on the deployment of Curriculum 2.0.
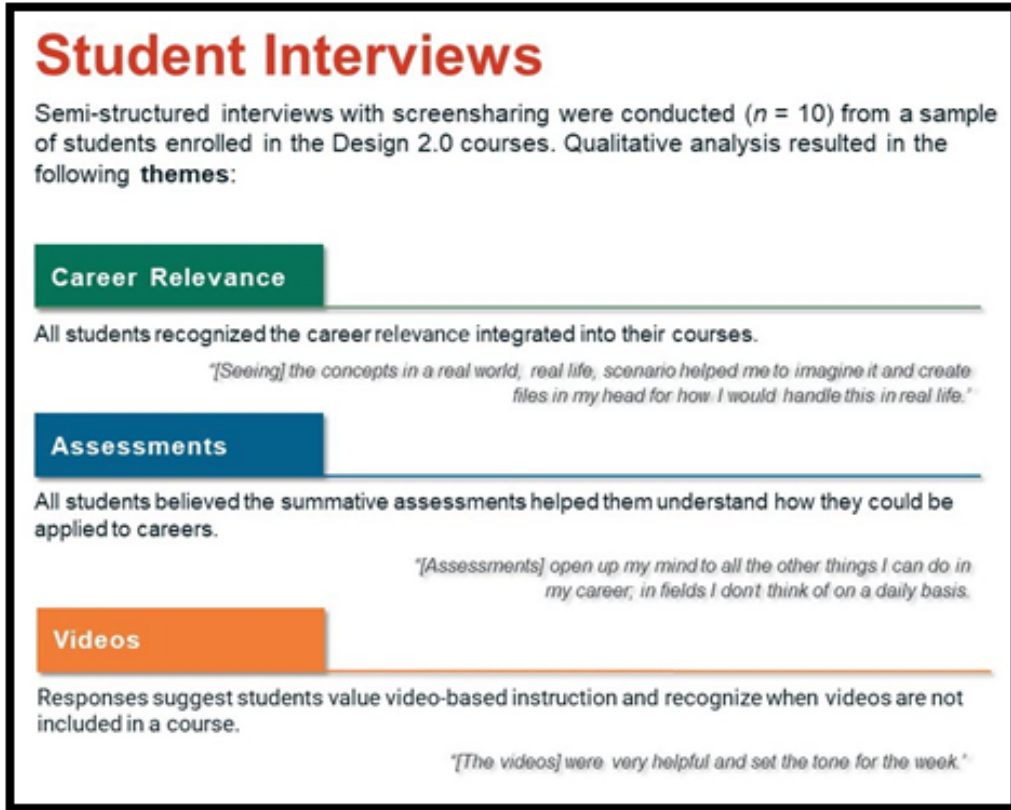

Student Interviews

Semi-structured interviews with screensharing were conducted ($n = 10$) from a sample of students enrolled in the Design 2.0 courses. Qualitative analysis resulted in the following **themes**:

Career Relevance

All students recognized the career relevance integrated into their courses.

"[Seeing] the concepts in a real world, real life, scenario helped me to imagine it and create files in my head for how I would handle this in real life."

Assessments

All students believed the summative assessments helped them understand how they could be applied to careers.

"[Assessments] open up my mind to all the other things I can do in my career, in fields I don't think of on a daily basis."

Videos

Responses suggest students value video-based instruction and recognize when videos are not included in a course.

"[The videos] were very helpful and set the tone for the week."

Figure 9 - Thematic results and contextualization from student interviews.

Conclusion

University of Phoenix is empowering learners to combine the traditional rigors of academic socialization with industry skills-aligned learning. Demonstrating behaviors indicative of the comportment, critical thinking, and academic citizenship of higher education students while earning the skills necessary for employment or career growth in an industry sector sets our graduates apart.

As higher education continues to coalesce at this intersection of education and careers, University of Phoenix is leading the way: through skills-aligned curriculum, authentic assessment, instructional design best practice, university processes that keep us nimble, and close collaboration with employers across industries, we *are* connecting curriculum to careers.

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About the Authors

Eve Krahe Billings, PhD, EDAC, is Dean of Academic Innovation and Evaluation at University of Phoenix. Krahe Billings' work at the University is grounded in the belief that learners benefit from socialization to the rigor, critical thinking, academic expectations, and longstanding traditions that are the hallmark of higher education. Balancing this with the institution's skill-aligned curriculum initiative, she oversees student learning assessment across the University. Krahe Billings earned her Ph.D. in Complexity Science and Innovation at Arizona State University in 2013. Her interests lie in the successful facilitation of heart-centric environments where innovation can occur, as well as in the relationships necessary for emergent thinking to be successful and sustainable. Prior to joining UOPX, she was a tenure track associate professor and academic director at a large Research 1 university. Krahe Billings received peer reviewer status from Quality Matters in 2013 and completed a certificate in evidence-based design in 2018. Krahe Billings is a 2019 Wellesley cohort HERS fellow and a member of the Board of Directors of the American Association of University Administrators.

Mary Elizabeth Smith has been involved in educational innovation for over thirty years. Currently the Director of Learning Innovation Strategy in the Center for Teaching and Learning at the University of Phoenix, she previously served as the Research and Implementation Strategist and the Director of Curriculum Development. Smith began her career working with K-12 pre-service teachers to integrate technology into lesson plans and produce hyper-card stacks. Her affinity for educational technology places her in the category of an 'early adopter' and she was one of the first faculty at a previous institution to convert an on-campus Computer Science course for online delivery in 1999. Smith's career in education includes working in curriculum development, learning design, faculty development, faculty, and e-learning roles for four universities and several community colleges as well as two educational

software companies. Smith holds a bachelor's in Speech Communication and Journalism from Southern Illinois University and an M.Ed. in Educational Media and Computers from Arizona State University.

Hillary Halpern has been with University of Phoenix for 16 years and currently serves as the Senior Director Program Deployment, where she has leveraged her in-depth insights from her student support and process improvement background to develop, improve, and maintain the University Program Lifecycle (UPL) process. Halpern helps guide the evolution of the program lifecycle process at the institution to help ensure academic programs are aligned to external standards and regulations, as well as how they can be best leveraged using occupational codes and jobs to build an infrastructure to connect courses and programs to skills. Recognized as "Rookie of the Year" examiner award in 2017 from Southwest Alliance of Excellence (SWAE), Halpern also earned the 2017 President's Award from University of Phoenix for her contributions to the UPL process. She has served as a lead examiner for the SWAE and as a speaker on process improvement at regional and national conferences. Halpern has a Bachelor of Arts in Psychology from Arizona State University, and a Master of Business Administration and Graduate Certificate in Human Resource Management from University of Phoenix.

Doris Savron has over 23 years of experience in higher education and as Vice Provost at University of Phoenix she oversees the strategy for University of Phoenix academic programs and curriculum design, institutional assessment and faculty, including oversight of strategy for degree, certificate and course offerings, design of curriculum and student learning outcomes. She works collaboratively with her team members to innovate academic solutions that enable the University to provide exceptional student experiences and learning environments to support student success. In her tenure with University of Phoenix she has served as associate faculty, campus vice president, and regional vice president of student services and college operations. Savron earned her MBA from Cleveland State University and is completing her doctorate in management in organizational leadership. Savron serves on several boards including Greater Phoenix Chamber of Commerce, Career Connectors, and Propenum College in Lusaka, Zambia. She also served on the advisory council for UPCEA and AACRAO's new 2023 Convergence conference focused on the emerging field of alternative credentials in Higher Education. Savron is a frequent speaker at higher education events with expertise on mapping relevant skills in programs and building an infrastructure to support career tools in curriculum design, micro credentialing and other innovations in curriculum.