A 21st Century University for the 21st Century Workforce
USU/APLU Concept Paper

Challenge

The U.S. education and workforce system is deeply fragmented. The biggest rift divides career and workforce training from college pathways, resulting in two separate systems. These dual systems penalize low income, adult, disadvantaged and transitioning learners (e.g. veterans, ex-offenders, unemployed), who often face greater pressure for immediate economic security, forcing them to forego the longer-term investment in higher education. Evidence is clear that post-secondary degrees lead to higher wages to individuals and greater economic and social impacts for cities, states and nations. Equally, businesses of all types indicate that individuals lack both the career-spanning critical thinking and communication skills and harder technical skills. The dichotomy between education and training and skill types disadvantages us all.

As college affordability becomes more difficult, and trends suggest that it will, and technology restructures (or eliminates) jobs at an accelerated pace, then economic survival for individuals means acquiring not only soft and hard skills, but the ability to relearn and retrain throughout a lifetime.

Although not everyone needs a college degree, for individuals to navigate an ever-changing economy, a single postsecondary training program or event is rarely sufficient to move individuals permanently out of poverty and ensure family sustaining wages over the course of a lifetime. Equally, the one and done bachelor's degree will be similarly insufficient to navigate a career.

System wide problems need system-changing solutions. The need is to re-envision a single, integrated system that supports learners to enter and exit over the course of a lifetime in any place at any time; a system that serves the changing needs of US workers and businesses – that delivers the skills needed today and continuously reskilling for the needs of tomorrow.

To change a system, its component parts also have to transform. The university is a central player to integrate and align the two systems.

Solution

Systems change is not for the faint of heart. It requires that we challenge assumptions and common wisdom about how things work, determine strategic yet tactical areas to target change efforts, and have varied ways to deliver options, as one size never fits all. Below are places to start.

First, we need to refocus away from a students vs trainees dichotomy and embrace learners as the focus of any education/training related work. That means we need to consider the following:

- Recognize that learners include all students, employees, trainees, neighborhood residents, individuals in-transition (laid-off workers, unemployed youth, ex-prisoners), retirees, etc… and that all learners require combinations of hard (technical) and soft (e.g. teamwork, empathy) skills at different points along their career and life journey. Learners often have families that are impacted by learning choices and transitions which will have to be included in how we design pathways.

- Learning itself is evolving, and two trends must be addressed in our thinking. First, learning has an unavoidable social component, so learning approaches must contain some type of social relationship to support the learner such as peer mentors. Even in fully on-line learning formats, AI, gamification and social media interfaces insert a social dynamic into the learning design. On the other hand, learning on one's own is also increasing as technology enables people to grab just in time learning in small bites to meet a variety of learning needs. Examples abound such as MOOCs, Youtube DIY, and Khan Academy. With that diffusion, determining how to measure and recognize skill acquisition in these formats will grow in importance.

- Remove the artificial barrier created between hard, technical and soft, cognitive skills as the core outcome in any discipline and any approach to career development. Learners need them all, workers need them all, entrepreneurs need them all. For example, good coders don't just sit at a computer and code, but must work in teams, have a level of empathy with their audience, and may need initiative if they are to survive in the gig component of the economy. Similarly, artists need skills like knowledge of spreadsheets, data analysis, cybersecurity, intellectual property protection if they are going to manage their artwork as a business, which many will need to do. Equally, welders may need to write essays for applications, work in teams to complete a project, and do spreadsheets to complete their taxes.

- Individuals do not just need to be prepared for specific jobs, but to survive periods of unemployment and change, including options for self-employment. Currently around 40% of workers work in the gig economy, and generally thinking is that this will only grow. Some industries, such as film, are already organized in gig style. Moreover, certain skills and jobs have built in obsolescence. Technical jobs, which are often some of the best paid, are also the highest risk. If a learner does not keep skills up, they can get left behind. In an economy where very few people will start and retire in the same industry, let alone the same company, and technology is accelerating, life long learning is essential. Thus, higher education providers will need to re-imagine their relationships with learners—from a product (degree, certificate) to a lifelong relationship (beyond alumni donor). Moreover, this may require reconsidering how colleges, departments and disciplines are configured.

Second, we need to understand the key points in which the education and training systems can align and connect, then strategically target change efforts in those areas. As the suggestions below indicate, these key points are not mutually exclusive.

- Degree design—building curricula that may ultimately lead to degrees, but have exit points, marked by the acquisition of work-based competencies, and entry points, marked by the tools that can recognize, measure and assign credit to competencies acquired at work, that allow learners fluid transitions between school and work over the long-term. Credentials, badges and certificates (discussed below) can be a part of this.

- Credentials, certificates and badges that recognize work-based competencies and allocate college credit, as another strategy to allow learners to advance their work-placed skills while stacking credentials over time. This will require postsecondary institutions to carve up and carve out the 120 credit requirements to a B.A. degree. It will also require deeper and different relationships with employers to ensure that credentials higher education offers has value to what employers need.

- Creating more comprehensive work-based and experiential learning opportunities, such as apprenticeships, with skill acquisition marked by badges and credits, and heavy employer engagement in defining those skills and competencies. Learn and earn must be recognized as a core pathway for students. Equally, provide similar structures in workplaces—allowing employees to accumulate certified skills (and credits) that create opportunities in and out of the employer's workplace.
- Reorienting and rethinking the nature and structure of partnerships, including the need for seamless transitions and curricular alignment among higher education institutions in a region and expanding and deepening relationships with employers, building off research and innovation relationships and other transactional relationships where existing.

Third, we need innovative institutions willing to boldly and collaboratively enter this space and make hard decisions and hard changes to move this work forward.

- One way to advance this work is to identify a cohort of universities and partners (employers, creditors, cities) willing to work together to work through the barriers present in different environments, so the results are not a singular model that is hard for others to attain or replicate.
- Anchor any cohort with postsecondary institutions which have already started transforming in this arena.

Finally, national intermediaries will be instrumental in helping to organize the cohorts, manage knowledge and diffuse results and advocate for change. The Association of Public and Land-grant Universities (APLU) and the Coalition of Urban Serving Universities (USU) has an extensive history organizing cohorts to advance higher education transformation and has started to apply this work to advancing the 21st century workforce.

- *Aligning Technology and Talent Development*, a partnership with the Lightweight Innovations for Tomorrow (LIFT) manufacturing institute to convent expert educator teams to identify competencies demanded by new technology development and recommend education and workforce development strategies.
- Water Talent Network, a partnership with the Water Council and the University of Wisconsin Milwaukee to develop a network of university-industry partnerships focused on developing talent for the water industry.
- *Urban Universities for HEALTH* (**H**ealth **E**quity through **A**lignment, **L**eadership and **T**ransformation of the **H**ealth Workforce), a partnership with the Association of American Medical Colleges and the National Institute of Health to better prepare the health workforce to meet community needs, recognizing that society as well as employers benefit from skill enhancements.
- *Transformational Planning Grants and Collaborative Opportunity Grants,* a partnership with the Bill & Melinda Gates Foundation, to support innovative strategies to advance transformational change, which includes pathway development, new types of university-employer relationships, and new options for adult learners.

Additionally, APLU and USU have begun to organize to enhance our ability to advance initiatives in this area.
- USU created a 21st century workforce strand or committee to oversee its work in this area, and held a workshop to explore cutting edge thinking in this area. Results can be viewed here: https://urbanuniversity.wordpress.com/2017/12/01/building-a-21st-century-workforce-workshop-results/

- APLU has a Talent and Workforce Working Group that is developing a position paper on the role of universities in employment readiness. This paper will complement the recently released report, *Ready for Jobs, Careers and a Lifetime*. A copy can be accessed here: http://www.aplu.org/library/2016-annual-report/File

Project Concepts to Move Forward

These are big ideas, and there are two broad approaches to address them. The first set starts with long-term planning efforts, given the large number of component parts, the variety of stakeholders that need to align around change, and the thinking that needs to go into the project design. The second set of concepts are smaller in design and are more immediately action centered. Their reach is not as deep or wide, but the actions can serve as models for the bigger transformation efforts, and start to build the internal and external coalitions of stakeholders needed to advance the larger changes.

Planning Toward Action Project Concepts

Goal: Reinvent Apprenticeships and Work-based Learning

Strategy 1: A Liberal Arts or Social Science Apprenticeship Model
This concept would start with planning grant for several institutions to work collaboratively with employers and each other to design an apprenticeship model in a discipline that is not usually associated with apprenticeships.
- One potentially fertile opportunity might be public administration, especially as workforce in many local, state and national agencies is declining, and many agencies have high skill needs, and with increasingly high need for science based knowledge (e.g. water, sewage, environmental management, energy). Similar examples where demand for a workforce is high include criminal justice.
- Another way to approach this would be to develop soft skill apprenticeships for math, science or other technical disciplines. Ideas might include having an engineer do a marketing apprenticeship. Technical salespeople are often in high demand.
- A third variation is to instill technical skills into broader disciplines, such as placing a marketing student in an engineering firm.

Strategy 2: Mixed Work-based Learning Pilot
This initiative would engage a limited number of member institutions in identifying and piloting cutting-edge strategies for incorporating work experience into the curriculum. Apprenticeship models appropriate to four-year institutions would be included, as would new models for internships and externships, industry-engaged capstone and problem-based learning courses, and other practices that provide students opportunities to experience both "soft" and technical skills development in the context of the working world. Pilots would be documented so that lessons learned and strategies could be shared across member institutions not participating in the pilots.

Goal: Integrate Education and Training Pathways

Strategy 1: Design a degree with training on and off ramps

This concept would create a working cohort of several university teams to design a degree curricula that incorporates on and off ramps, so that students can attain skills, credentials and credits along a pathway that allows easier entry and exit to the university from the workforce. Portions of the degree (e.g. skill certifications) might even be made available to community learners who are not admitted as students.

Strategy 2: Pathways Integration Model
In this effort, institutions would design and pilot solutions for better integrating a "pathways" model for curriculum completion. The pathways models might include on- and off-ramps, stackable credentials, and other elements of career pathways approaches, and would be required to include work-based learning and integrated career advising/support strategies. Pilots would be identified across disciplines to provide examples of how such models can be applied to both technical and non-technical fields. Pilots would be documented so that lessons learned and strategies could be shared across member institutions not participating in the pilots.

Goal: Credentialing career-spanning and technical skills

Strategy 1: Develop a combined microcredential that pairs technical and soft skill
In this project, several institutions would work together and with employers to develop a badge or credential effort that marries a technical and a soft skill together, not separately or one at a time. Ideas might include collaborative coding, culturally competent budgets and spreadsheets, or empathic data analysis. In this approach, learners get a technical and soft skill verified for employers and some type of credit for themselves. The goal would be to start connecting our thinking (and pushing competency evaluation forward). The learning/curriculum component of this process would include mentoring and peer-to-peer support.

Action to Scale Ideas

Strategy 1: Skills Gap Analysis
This initiative would fund select university-industry partnerships to work together on assessing the skills gap in the industry partner's field, and to work together on strategies for addressing the gap. Labor market data would be combined with university and industry partner projections regarding the workforce needs in the industry partner's sector, and plans would be collaboratively developed for new or adapted curricula, work-based learning strategies, alternative credentials approaches, or other strategies for addressing the gaps. Based on the analysis and collaborative planning effort of pilot university-industry partners, tools and guidance would be developed for university-industry partnerships focused on assessing and addressing skills gaps.

Strategy 2: Blending academic and career advising learning community
Some forward thinking institutions have already started the hard work of integrating of career services much earlier into a learner's journey through a higher education institution. In this project, we would build a learning community around those leaders that would help them advance in this space to advance their own efforts, include those starting in this process and developing a playbook for others to use.

Strategy 3: Replicate(Adapt) an Existing Apprenticeship/ or Work-relevant innovation
In this project, a cohort of higher education institutions would work together to replicate an existing apprenticeship from one university to several others. An example of a work relevant innovation worth

replicating is Cleveland State's Sales Institute which provides non-discipline associated communication, negotiation and other people navigation skills to learners in CSU and local businesses.

Implementation Strategy

As noted earlier, APLU/USU have designed and managed many projects that use a competitive process to build collaborative learning communities to diffuse innovative, evidence based practices and to identify and test innovative, new practices. APLU/USU senior staff (some of whom are former senior institutional leaders) began studying institutional change and how to leverage it several years ago. Below details what that process looks like.

1) To ensure the institutions have the capacity and commitment for the work, the cohort is selected through a competitive process, centered around a request for proposal (RFP). The proposals are evaluated by national expert committee (recruited for their expertise in the topic area and capacities needed for the project). The committee reduces the pool of potential candidates. An executive committee, a subset of the expert committee, conducts video conference to dig deeper into each candidate institution, and that information is used to make the final selection.
2) Once the cohort is selected, APLU/USU facilitate collaboration, engagement, collective problem solving and peer to peer learning among the cohort and across participating institutions and monitor project progress using evidence, feedback and deep relationships to course-correct along the way. We use multiple theories of change, relevant to the project, including continuous improvement networks and collective impact approaches.
3) Finally, APLU/USU then leverages the learning from this cohort to drive change at the institution level and across the broader postsecondary sector by increasing understanding of the importance and potential impact of these changes

Change is needed. APLU/USU is ready to help advance the 21st century university that is adapted to successfully educate the 21st century workforce.