RECLAIMING INNOVATION IN CAREER EDUCATION: A MANDATE FOR THE SECTOR

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Today’s Discussion

- Change
- In Demand Knowledge, Skills, and Abilities
- Impact of Change and KSAs on Schools
- The Imperative of Innovation
- Surviving and Thriving in the Current Environment
Change has always been a fundamental element of the human condition. The current *pace* of change is unprecedented.

- Technological Change
- Social Change
- Organizational Change

Change has never been as *disruptive* as it is now.
## Pace of Disruptive Change

<table>
<thead>
<tr>
<th>Date</th>
<th>Invention</th>
<th>Years To Mass Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1873</td>
<td>Electricity</td>
<td>46</td>
</tr>
<tr>
<td>1876</td>
<td>Telephone</td>
<td>35</td>
</tr>
<tr>
<td>1886</td>
<td>Gas Automobile</td>
<td>55</td>
</tr>
<tr>
<td>1906</td>
<td>Radio</td>
<td>22</td>
</tr>
<tr>
<td>1926</td>
<td>Television</td>
<td>26</td>
</tr>
<tr>
<td>1975</td>
<td>PC</td>
<td>16</td>
</tr>
<tr>
<td>1983</td>
<td>Mobile Phone</td>
<td>13</td>
</tr>
<tr>
<td>1994</td>
<td>The Web</td>
<td>4</td>
</tr>
<tr>
<td>2000</td>
<td>Online Banking</td>
<td>3</td>
</tr>
<tr>
<td>2007</td>
<td>iPod</td>
<td>3</td>
</tr>
<tr>
<td>2004</td>
<td>Facebook</td>
<td>2</td>
</tr>
<tr>
<td>2007</td>
<td>Twitter/Instagram, etc.</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>Uber</td>
<td>1</td>
</tr>
</tbody>
</table>

*Slide Adapted from Mark Milliron, League for Innovation*
The Most Disruptive Change of All

Artificial Intelligence and Machine Learning

- Robotics
- Mixed/Virtual Reality
- Cloud Computing

- Not just task replacement, but role replacement
- Computers learning without human involvement
- Combined robotics, M/V reality, and cloud computing
- “Singularity”

Two Implications for Career Colleges: What and How We Teach
The Central Role of Innovation

- The most effective “antidote” to perpetual change is perpetual innovation.

- We must see everything in our schools as dynamic and in flux rather than fixed in time or space.

- Addressing in demand skills should be the core focus of innovation.
In Demand Skills Research

HIGH LEVEL FINDINGS

The full report is available at: https://www.career.org/skillldemands.html
Research Across Eight Industries

- Healthcare
- HVAC(R)
- Cosmetology
- Transportation/Logistics/Materials Moving
- Information Technology
- Manufacturing
- Culinary Arts
- Automotive/Diesel Mechanics

These industries represent the highest percentage of career college graduates in the respective fields.

Each industry has its own in demand knowledge, skills, and abilities report for current, new, and missing skills.
Research Findings

- Industry needs are changing more rapidly and more fundamentally than at any previous time, complicating the ability of schools to “keep up” with changing requirements. (The CECU Employer Engagement Working Group is investigating more productive school-industry partnership models and there are strategies schools can employ to address the challenge addressed later in this report).

- Fortunately, industry is ready and willing to deepen partnerships with career colleges to better meet evolving in demand skills (curriculum, equipment, real-world experience).

- There is a “new” set of universal knowledge, skills, and abilities across all industries that falls under the title of “New Foundational Skills” that covers three domains: Human Skills, Digital Skills, and Business Enabler Skills. In demand KSAs follow this paradigm.

- Processes for new program development and program revisions would be more effective if they were more agile, fast, and reflected greater industry input. This has implications for a potential new and innovative school-accreditor-industry partnership.

- Current accreditation requirements sometimes inhibit innovation and delay necessary program revisions and updates.
Research Findings

- Virtually all vocational-technical fields require entry level (after graduation) and continuous, ongoing training for employees. That training is not currently being provided by career colleges, but rather by industry. This is a significant, potential opportunity for sector schools.

- The expansive growth of industry-delivered training, even ab-initio training, presents a potential threat to the career college diploma/degree program model.

- There are potentially significant changes on the horizon such as hybrid job positions, wholesale industry disruptions (autonomous vehicles, machine learning, cyclical/perpetual education and training) that could have major implications for industry and career colleges.

- There seems to be a competitive advantage for schools that build the deepest industry relationships to meet in demand skills needs.

- While the current pace of change and resulting KSA gaps present risks to the career college value proposition, there is no other sector of higher education that is as industry focused and whose programs are more job focused. There is a solid foundation on which to address identified challenges and opportunities.
Fundamental Influences on Schools

- New Functional Skills (Technical, Human, Business)
- Hybrid Jobs
- Industry Training for Entry Level Employees
- Continuous Training
- Technology/Automation As Core to Curriculum
- Artificial Intelligence/Machine Learning
- Shift in Credentialing
New Foundational Skills

The New Foundational Skills of the Digital Economy

These 14 skills, already in wide demand by employers, command salary premiums and are crucial for workers who want to keep pace with a changing job market.

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## Shared In Demand Knowledge, Skills, and Abilities Across Industries

<table>
<thead>
<tr>
<th>Technical In Demand Skills</th>
<th>Soft Skills and Personal Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automation-Tech/Human Interfaces</td>
<td>Writing/Communications</td>
</tr>
<tr>
<td>Use of ERP Computer Applications</td>
<td>Customer Relations</td>
</tr>
<tr>
<td>Data Management</td>
<td>Dependability/Accountability</td>
</tr>
<tr>
<td>Programming</td>
<td>Prioritization and Critical Thinking</td>
</tr>
<tr>
<td>Computation</td>
<td>Emotional/Social Intelligence</td>
</tr>
<tr>
<td>Environmental Compliance</td>
<td>Problem Solving</td>
</tr>
<tr>
<td>Design/Installation</td>
<td>Show Up and Be Drug Free*</td>
</tr>
</tbody>
</table>

*Number one response across industries.*
Wildcards

These are things that could dramatically change how career education works.

- eCommerce
- Proprietary Training
- Self-Monitoring and Self-Operating Equipment
- Machine Learning
- Robotics
- Non-Degree Credentialing
Focus for Innovation

INDUSTRY
CURRICULUM
CULTURE
EXPERIMENTATION
PARTNERSHIPS
What Is Innovation?

- Innovation is developing an idea, then executing on that idea to solve an identified challenge that improves outcomes and value for organizational stakeholders.

- It does not need to be “bleeding edge” or transformational, but it needs to offer a new way to solve an existing or impending problem.

“Knowledge is limited. Imagination encircles the world.”

Albert Einstein
Why Do We Need to Innovate?

The primary reason that innovation is now required for organizations to survive and thrive is that it is the most powerful and effective response to the pace of external change.
In the current hyper-change, hyper-competitive environment, career colleges MUST develop innovation as a core competency in multiple areas.

- Curriculum and Instruction
- Student Experience
- Growth
- The Business Model
- The Value Proposition for All Stakeholders

What does an ideal outcome look like? Who knows the most about it? Given no restrictions, how would they achieve the outcome?
Where/How to Innovate

- Intimate Industry Relationships
- Dynamic Curriculum
  - Frequent Review and Revision
  - Shared Content Across Programs
  - Adaptable/Based on Principles Rather than Discreet Content
- Organizational Culture
  - High Tolerance for Risk
  - High Tolerance for Change
  - Embraces Continuous Improvement
- “Skunkworks” Capability
- Clear Value Proposition for Stakeholders
- Powerful Partnerships

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Dynamic Curriculum

- Industry Led
- Course/Content Placeholders
- Principle/Scenario Based
- Hyper-Applied (Principle to Outcome)
- Revised Before a Full Cycle Is Completed
- Dynamic Delivery and Locations

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Innovation Examples

- WGU: Competency Based Education
- SNHU: Boot Camp Partnership
- SUNY: Open SUNY
- PPCC: Progressive Nursing Curriculum
- Perry Tech: School as Work
- CTU: Department of Military Education
- Full Sail: Accelerated Degree Completion/Launch Box
- Gurnick Academy: Pre-Start Engagement and Partnership
Surviving and Thriving
The Current Reality

The Seven Year Contraction in Higher Education

- Demographics (Declining Birthrates)
- Economy (Low Unemployment)
- Economics (Cost of Education and Debt)
- Societal Opinions about Higher Education
- Alternatives to College Programs

Demographics will not reverse the current trend until about 2028.

Although the declines are more pronounced in the Midwest and Northeast, student populations have declined in 34 states and that will spread further as high school graduation rates continue to decrease.
School Mergers and Closures

Some substantial number of institutions will not survive in their current state:

- 1,000,000 fewer students in Career Colleges since mid 2000s.
- About 125 for-profits have closed in the last two years.
- 7% enrollment decline in four year, for-profits since 2017
- About 50 private and public non-profits are merging or closing per year.

At current rates, at least 250 private, non-profits will close by 2028 and a potentially higher number of for-profits could close in the same period.
How to Be A School that Survives and Thrives

- Innovation, Innovation, Innovation
- Alternative and High Margin Revenue Streams
- Differentiation in the Market/Give Customers What They Want
- Licensure Programs
- Aggressive Partnerships
- Finance as a Core Competency
- Really, Really Good at Basics
- Culture for Success
Giving Customers What They Want

- Shortest Possible Completion Time
- Highest Possible Employability
- Most Value for the Money
Institutional Characteristics/Success Culture

- Entrepreneurial, People-Focused Leadership
- Nimble Decision Making and Organizational Agility
- Speed to Market
- Capacity to Experiment/Embrace Risk
- Empowered, Collaborative, Autonomous People
- Enlightened, Engaged Board/Ownership
- Ability to Scale (core competencies)
- Very Clear Identity
Career colleges are better placed than any sector of higher education to innovatively respond to the current highly disruptive influences affecting post-secondary education.

- Industry Relationships and Focus
- Applied, Career Focused Curricula
- Nimble and Open to Change
Summary

- The current pace of change is unprecedented and the implications are profound.
- There is a huge opportunity (necessity) to work more closely with industry for mutual benefit.
- Innovation is essential to legitimacy and survival.
- It is possible to survive and thrive, but you need a plan.
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