Making the Organizational Shift to Skills-Based Hiring & Learning

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#SkillsForHiring
MEET OUR PANELISTS

Jonathan Finkelstein
CEO & Founder, Credly

Kelli Jordan
Director, IBM Careers & Skills, IBM

Jared Auclair
Associate Teaching Professor, Northeastern University

Ryan Craig
Founding Partner, University Ventures
WHY NOW?

- **#1** Millennials want Learning & Growth
- **89%** Engagement the Top Priority for HR Pros
- **70%** Skill-Based Hiring Reduces Costs Significantly
- **85%** Employers know Resumes Lie
- **43%** The Gig Economy is Here
- **51%** Skill-based Learning is Industry Standard

Demand for skills-based learning & hiring at scale

- **Portable, digital, verified achievements**
Hiring for Skills Instead of Degrees

- IBM, Google, Apple and others have removed the degree requirement for new hires.
- Vetting skills with digital credentials.
- Colleges and universities seeking to be more responsive to a work environment seeking proof of specific skills.
THE NEED IS REAL & PRESENT

- **Automation and AI** are changing the way we work
- **120 million** American workers will need retraining in the next 3 years to continue to earn a living
- **Upskilling** impacts every single sector in the economy
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Millennials: The Cursed Generation

- Wealth
- Income
- Housing
- New business creation
Twin Crises Lead to Poor Economic Outcomes
Graduated into Underemployment

- **Samantha Wolverton**
  - George Mason international relations with minor in software engineering; worked in restaurant for a year after graduating

- **Christina DiMartino**
  - Mediocre grades in high school, then worked as waitress
  - Enrolled in business program at community college, dropped out
  - Attended for-profit college, got low-paying job as medical assistant

- **Morgan Combs**
  - Degree in psychology, then worked in restaurant

- **Yasmine Sadid**
  - Kent State computer science; best job was as realtor’s assistant

- **Wendy Pei**
  - Graduated from SF State, then worked in restaurants and retail for a decade

- **Jeffrey King**
  - Completed AA degree at CC, then worked as a waiter
  - Returned to UNLV to earn degree in actuarial sciences, still couldn’t get a job
Crisis of Underemployment

- Not unemployment, as student loans causing graduates to take first job that allows them to make loan payments.
- But “underemployment”:
  - Federal Reserve Bank of NY estimate: 45% of new college grads are underemployed.
  - Nearly 5M working part-time, would like full-time
  - Underemployed earn $10k less p.a.
  - Strada/Burning Glass finds pernicious persistence: 2/3 are still underemployed after 5 years, and 1/2 after 10 years.
  - Strada/Gallup survey: landing a job before graduation makes you 2.4x more likely to eventually exceed $60k vs. waiting (which leads to underemployment).
Most Significant Change in Higher Education

- Only ~50% of matriculating students reported that their primary or sole motivation for commencing postsecondary education was employment/income related.

- 90%+ report primary or sole motivation is employment/income related.
But Not Entirely Higher Education’s Fault: Mechanics of Hiring Have Changed

Hiring managers that use ATS:
- 2000: <1%
- Today: 75%

Companies that used social media to recruit:
- 2000: <1%
- Today: 73%

Most popular application mediums:
- 2000: 
- Today: 

(Images of job fair and popular job sites are shown)

(Images of job fair and popular job sites are shown)
Why Are Employment Outcomes Worse?  
Proliferation of Technical Skills

<table>
<thead>
<tr>
<th>Career Area</th>
<th>Technical Skills Specified</th>
<th>Cognitive and Soft Skills Specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>Engineering</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>Life/Physical Science and Math</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Manufacturing and Production</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Design, Media, and Writing</td>
<td>66%</td>
<td>34%</td>
</tr>
<tr>
<td>Research, Planning, and Analysis</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>Personal Care and Services</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>Finance</td>
<td>62%</td>
<td>38%</td>
</tr>
<tr>
<td>Marketing and Public Relations</td>
<td>62%</td>
<td>38%</td>
</tr>
<tr>
<td>Management and Operations</td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>Education and Human Services</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Hospitality, Food, and Tourism</td>
<td>59%</td>
<td>41%</td>
</tr>
<tr>
<td>Sales</td>
<td>59%</td>
<td>41%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>Clerical and Administrative</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>Customer and Client Support</td>
<td>49%</td>
<td>51%</td>
</tr>
</tbody>
</table>
What Are These Technical Skills?
Last-Mile Training

Borrowed from Telephony

- Hardest + most expensive to build
- Therefore most valuable segment
- Basis for natural monopoly

Talent Market Correlation

1. Digital training
   - Minimum: Ensures candidate no longer filtered out of ATS
   - Maximum: Offers training and experience on exact SaaS platforms employers utilize

2. Soft-skills training
   - Real project work in work-like setting furthers teamwork, communication, organization skills
   - Interview preparation and training

3. Absorbing frictions
   - Absorb education frictions by eliminating upfront tuition and guaranteeing employment outcome
   - Absorb hiring frictions by funding training + providing employers with opportunity to try before they hire
LMT Can Provide Better Value to Students

Cost to student

<table>
<thead>
<tr>
<th>Paid</th>
<th>Free or debt-free</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bootcamp Programs</strong></td>
<td><strong>Employer-Pay</strong></td>
</tr>
<tr>
<td>galvanize</td>
<td>talentpath</td>
</tr>
<tr>
<td>General Assembly</td>
<td>Avenica</td>
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<tr>
<td>PrepMD</td>
<td>Techtonic</td>
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Guaranteed outcome

Yes

No
# Digital Credentials

<table>
<thead>
<tr>
<th>Joe Samuelson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Designer</td>
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</table>

An illustrator and graphic designer based in Phoenix, Arizona. I specialize in helping individuals and companies increase target market visibility by creating captivating artwork. I am committed to staying current with trending design and constantly challenge myself to learn more. Through constant exploration of typography, imagery and illustration, my work transcends style. I have a passion for discovery and cultivating human connections.

[LinkedIn] [Twitter] [GitHub]

## Earned

<table>
<thead>
<tr>
<th>Certification</th>
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<tbody>
<tr>
<td>Adobe Certified Expert Premiere Pro CC</td>
</tr>
<tr>
<td>Cloud Video Streaming Technical Support</td>
</tr>
<tr>
<td>Power Query Video Certified</td>
</tr>
<tr>
<td>IBM Big Insights - IBM Open Platform - 2017</td>
</tr>
<tr>
<td>Adobe Certified Associate World Championship - Graphic Design</td>
</tr>
<tr>
<td>Adobe Design Foundations - Harper College Continuing Ed</td>
</tr>
<tr>
<td>Adobe Certified Expert - Photoshop CC</td>
</tr>
<tr>
<td>Digital Design Basics Certificate - Santa Barbara City College</td>
</tr>
<tr>
<td>Vector Calculus, Functions, And Motion In Space</td>
</tr>
<tr>
<td>Watson Analytics Level 1</td>
</tr>
<tr>
<td>IBM Storage Distributed Block v1</td>
</tr>
<tr>
<td>Adobe Certified Expert - Illustrator CC</td>
</tr>
<tr>
<td>IBM</td>
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</tbody>
</table>
Integrate Real Projects from Real Employers into College Coursework
In Faster + Cheaper World, Have We Passed “Peak Credential”

Second, third employers care more about first job and demonstrable achievements and competencies.

- More likely in world where achievements and competencies are archived and accessible digitally
The Promised Land

LIFELONG LEARNING
Skill-based credentialing—An Academics Perspective

- Jared Auclair, Ph.D.
- Associate Teaching Professor, Chemistry and Chemical Biology
- Director, Biotechnology, Bioinformatics and BATL
- j.auclair@northeastern.edu
- www.northeastern.edu/batl
Modern Higher Education Is Not Much Different Than It Was 300 Years Ago...

Courses (credits) in a prescribed sequence get you your degree (BS, MS, PhD)
Skill-based Learning in Higher Education

- Students as customers
  - Know what they want
- Microcredentials, Certificates, Degrees
- Build your own degree
- Focus on learning skills
- Link your credentials (badges) from different universities, companies, etc.
Biotechnology

Biopharmaceutical Drug Development

Cell Culture → Bioreactor → Separate/Capture/Refold → Viral Reduction/Inactivation → Purification → Concentration → Fill and Finish

Drug Substance → Drug Product
Skill-based Credentials Empowering Innovative Research, Education and Training Collaborations
Skill-based Credentialing: Regulators and Industry

**Regulator (US FDA)**
- Drug Stability
- Quality by Design
- Certified Reviewer (level 1)
- Good Manufacturing practice (GMP)
- Design of Experiments
- Analytical technology

- Expires every 5 years
- Co-branded with a company

**Industry**
- Cell Culture
- Certified Biotech—Cell Culture (level 1)
- Design of Experiments
- Sterile Technique
- Regulatory Science

- Expires every 5 years
- Co-branded with a company
- Co-branded with University
- Expire every 5 years
- Co-branded with FDA

Foundational
Looking beyond the college degree

*Using a New Collar approach to close the skills gap*

Kelli Jordan
Director, Career and Skills
jkelli@us.ibm.com
By 2030, the global talent shortage could reach 85.2 million people.

45% of employers say they can’t find the skills they need... for large organizations with 250+ employees.

67% say candidates lack the necessary experience.

32% of employers say the main reason they can’t fill roles is a lack of applicants...

20% are adjusting education and experience required to fill positions.

2018 Talent Shortage Survey: Solving the Talent Shortage - Build, Buy, Borrow and Bridge.
There are roughly 700,000 unfilled technology jobs in the United States today.
Using a *New Collar* approach to close the skills gap
What is New Collar?

New Collar roles require skills, but not necessarily a degree.
Rethink your approaches to hiring.

Skills are just as relevant as a degree. Open the aperture on your talent pipeline by removing degree requirements if they are not necessary for the role. Ensure the listed job requirements are truly valid, and not just a wish list. Seek out new sources of talent, like bootcamps and community colleges.

Leverage programs focused on skill development and practice.

Technology can be learned on-the-job, not just in a classroom. Modern-day apprenticeships combine learning while earning. Apprentices get hands-on experience and build their skills while learning from experts. It’s a built-in pipeline with the exact skills you need for your business.

Create a culture of continuous learning and growth.

Skill needs are changing rapidly, so programs that support continuous learning are key. Learning that can be consumed on-demand, in smaller time commitments, help learners to build a daily habit. Digital credentials are an easy way to showcase and celebrate learned skills and accomplishments.
1: Remove the degree requirement

Determine if a degree is really required for the role, and if not, remove it -- you’ll immediately open the aperture of your pipeline and increase your funnel of candidates.

2: Focus on the skills needed

Ensure the job reflects the true skills needed, not a wish list of unrealistic characteristics.

3: Build new pipelines

Look beyond your traditional sources of talent to find new candidates. Think about community colleges, bootcamps, transitioning military veterans, returners.
LEVERAGE PROGRAMS FOCUSED ON SKILL DEVELOPMENT AND PRACTICE

**Months 1 - 3**
- 80% Learning
- 20% Training/mentoring/projects

**Months 4 - 6**
- 50% Learning
- 50% Training/mentoring/projects

**Months 7 - 9**
- 20% Learning
- 80% Training/mentoring/projects

**Months 10 - 12**
- Complete learning
- 95% Training/mentoring/projects
+ All IBMers receive personalized learning content curated for each IBMer based on their current role and skills - and the skills required for the future

+ Digital badges offer a way to demonstrate skill, expertise, and experience, allowing IBMers to build a personal brand and advance their career
QUESTIONS?
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