Crisis Of Affordability

• 1970s: typical student could pay tuition by working 182 hours.
• 2013: it takes 991 hours (full-time job for half the year).
• Wealth gap between young and old is at its widest point.

Typical household headed by 65+ year-old has net worth 47x greater than household headed by someone under 35.

• States disinvesting in higher education.
• Likely having a negative impact on economic growth.
• High sticker prices discourage enrollment and matching.
Crisis Of Data

• “My only question is if he’s that good a hitter, why doesn’t he hit better?”
  - Billy Beane

• “Good hitter” in baseball = 4Rs in higher education
  OBP in baseball = ??? in higher education

• Positive steps: New College Scorecard, Brookings Value-Added Ratings, new Gates initiative
Crisis Of Governance

- Missions tend to be multifaceted, complex and vague.
- Sometimes there’s a double-bottom line.
- More often, so many bottom lines, there’s really no bottom line at all.
- How do fiduciaries exercise appropriate governance?

Symptoms:
- Growth in non-instructional staff
- Athletics
- Research?
Lazy Rivers

» Texas Tech spent $8.4M on a waterpark with a lazy river and waterslide, paying for it with an increase in student fees.

» Auburn has developed a $52M waterpark including a 45-student paw-print-shaped hot tub and a 20-foot wet climbing wall, paying for it by raising its student activity fee from $7.50 to $200.

» Pensacola Christian has put in a $1M wave rider.

» North Dakota State is building a waterpark with a 36-foot vortex of swirling water, a fireplace on an island in the middle of a pool, a rain garden to mist lounging students, and a zip line atop it all.

» Clemson is developing a 38-acre Lakefront property to include “blobs” – floating mattresses placed so students can jump “like [on] American Ninja,” says the University’s director of recreation.

» Missouri State has put in a waterpark complete with zip line and lazy river, but insists on calling the lazy river a “current river” because Missouri State students are “not lazy.”

» Missouri has a lazy river, waterfall, indoor beach club, and a grotto modeled after the one at the Playboy Mansion.

» Louisiana State is building a lazy river that will spell out the letters LSU in the school’s signature Geaux font, paid for by quadrupling of student fees.
“Bankruptcy be damned” – LSU

Louisiana State University Starts $85 Million 'Lazy River' Leisure Project Despite Budget Shortfall

Louisiana State University is pushing through with its $85 million leisure project despite the institution’s budget issues. The project would include a rope-climbing course, an outdoor adventure center, a sun deck, and a manmade “lazy river.”

“We will be the benchmark for the next level”

- LSU Director of University Recreation
For Half The Population, The System Feels “Rigged.”

- Higher education has expanded from an elite audience to the mass market.

- Unfortunately, expansion in market size has not been accompanied by a concomitant expansion in product diversity.

- Isomorphic system has swelled under false belief that “monoculture” of bachelor’s degrees would serve all students.

- But it doesn’t: Only about 50% of U.S. students who embark on bachelor’s degree programs actually complete.

- Employers and hiring managers are equally responsible: system of degree- and pedigree-based hiring.

- Result is skills gap:
  - 8 million unemployed
  - ~30 million underemployed
  - 5 million jobs unfilled
U.S. Colleges Are Seeing Impact Now

- First for-profits; enrollment down by half over last 5 years
- Small private and midsize state universities: 70% effectively failed to meet budget for both freshman enrollment and net tuition revenue in 2014-15

Gallup-Purdue survey: only half of 30k college alumni strongly agreed that higher education investment was a good one.
  - Only 38% of younger alumni.
  - Employers also dissatisfied: Ernst & Young, Penguin Random House, Google.
  - Market for 100% online degree programs appears flat.
  - "Higher education has to get past the ‘take our word for it’ era. Increasingly, people aren’t.” – Mitch Daniels, President of Purdue University
Market View

• Elite universities will be fine… for an indeterminate period of time
• For the rest, starting to see “Great Hollowing Out”
  • Retail: Sears, JC Penney, Gap, J. Crew
  • Restaurants: Olive Garden, Red Lobster, TGIF

• Likely connected to decline of middle class
• Question: “Discounter or Premium Provider”
  • With market trend, can you afford to be anything else, or to not choose?
Part II

What Matters To Students: Employability
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.

• 92%+ report primary or sole motivation is employment/income related.
Yawning Gap Between College and Employment

Casualties of gap:

• Dissatisfied students
  • ~20% of graduating seniors with job offers before graduation

• Dissatisfied employers
  • Only 11% think graduating students have competencies their businesses need
Major Cause of Skills Gap

- In job descriptions, technical skill requirements now outnumber cognitive + non-cognitive skills in virtually every sector of the economy.

- Colleges and universities have not incorporated technical training into existing programs, continuing to believe that they “prepare students for their 5th job, not their 1st job.”

- Result: The Empty Quadrant

Students need help (especially “Organization Kids”)
One-to-One Relationship

Generally not scalable solution
Career Services Has Not Met Challenge

“Career services must die”
- Andy Chan, VP Career Dev’t at Wake Forest
Emergence of Intermediaries
Last-mile Training ("Bootcamp") Model

galvanize

THE MODERN URBAN CAMPUS

WORKING AND LEARNING BECOMING SYNONYMOUS

EDUCATION FOCUSED ENTIRELY ON OUTCOMES

Master of Engineering in Big Data

A NEW CLASS OF DATA SCIENTISTS
Last-Mile Training Model for...

- Healthcare
- Biotech
- Energy
- Financial services
Revature Model

- Training entirely free to candidates.
- Revature hires candidates who complete training and then assigns to client projects.
- Candidates commit to Revature for two years in return for training.
- Revenue model: spread between billed rate and employee comp.
- Clients hire employees after one year at no additional cost; most employees hired by clients.
What Staffing Models Allow

Better value proposition to student required to gain acceptance for new pathways/credentials
Two Short Steps to Disruptive Credentials

Step 1:

University partner like CUNY or ASU works with Revature to turn “4 + last-mile training/placement” into something more like “1 + last-mile training/placement.”

Step 2:

Staffing/placement provider extends training to cognitive + non-cognitive skill development – displacing role of university.
Disruptive Credential: The College “MVP”

In Search of a College MVP

What is higher education’s version of the minimum viable product -- the smallest, simplest unit that meets the public's needs? Developing it will be a key goal for college leaders over the next decade, Ryan Craig argues.

“This largely technical training is increasingly referred to as last mile not only because it leads directly to employment, but reflecting the last mile in telecom, where the final telephonic or cable connection from trunk to home is the most difficult and costly to install, and also the most valuable.”

Cognitive + non-cognitive skills  Technical skills  Placement
Many Different Pathways to Good Jobs

• Bachelor’s degree
• College MVP + last-mile training

• For those with College MVP, subsequent pathways will emerge to equip new employees with the higher-order thinking capabilities required for more complex and managerial positions.

• Higher education will go from a one- or two-time purchase for most students to a product employees consume as needed throughout their professional lives.
What SaaS Has Done to Enterprise Software...

SaaS MODEL

One-time purchase → Customer for life
Alternative Framework For Community Colleges

**Academic Paradigm**
- Faculty-centric
- Curriculum-centric
- Little focus on assessment of competencies
- Outcomes not measurable
- Little to no focus on placement ("prepare for fifth job, not first job")

**Placement Paradigm**
- Assessment of competencies
- Employer-connected
- Placement-centric
- Education/training viewed as instrumental to placement, not as end in itself
- Clear, measurable outcomes

Students at community colleges and non-selective universities would be better served if institutions were reconstituted along placement/workforce paradigm.
Part III

The Great Unbundling
The Great Unbundling
Degrees: Default Currency of Labor Market
Unbundling 101

- **Music**
  - Album/CD bundle to iTunes

- **Television**
  - Cable bundle to Netflix and HBO Now
  - Now Verizon and other cable providers starting to offer choice

- Unbundling shifts producer surplus to the consumer

- Bachelor’s program is also a bundle

- Does every element provide adequate benefit to every student?
  - Gen. ed. courses
  - Courses in major
  - Distribution requirements
  - Library
  - Extracurriculars
  - Athletics, lazy rivers, research?

- What might prompt “The Great Unbundling”??
Finer Currency Increases Market Efficiency
A Better Term for “Competencies”

FOR ONLINE TO REALLY MATTER IN EDUCATION, WE NEED TO REDEFINE COMPETENCY

IN THE EARLY ‘90s, I could tell what someone thought about the Internet’s prospects for transforming higher education by listening to their vocabulary. If they used terms like “distance learning” or “distance education,” they’d probably been working in continuing education for some time and saw the Internet as simply the latest in a line of technologies — beginning with correspondence courses, and including the latest two-way video systems — to expand the reach of colleges and universities. The Internet wasn’t going to disrupt the field. So why should it define it?

In contrast, those of us who rejected “distance learning” in favor of “online learning” understood that
Competency Marketplaces

PRODUCTS
- Skill-based Hiring Tools (employers)
- Guidance Tools (job seekers)
- 3rd-party products

PLATFORM
- Normalized Skills Database
- Structured data (person, jobs)
- "Unstructured" Skills Data

- Assessments (optional)
- Badges, Certificates

Skill Extraction
- Web Crawling
- Machine Learning + NLP algorithms

Lauren Bowen
Design is my lifelong craft.
San Francisco, California | Internet
Current: LinkedIn, Nailed Interests
Previous: LinkedIn, Advocate Software, Yamata Software
Education: Georgia Institute of Technology

BIO
- Share an update...
- My passion to create and build has served as the pivotal foundation in my career as an engineer and designer. Solving problems is what I do, through elegance and original thinking.
- My current interests lie at the intersection of design and disability, and how inclusive design can be leveraged to create products, tools, and experiences that change lives.
LinkedIn Declared Strategy

• We’re going to have a profile for every member of the global workforce.
• We’re going to have a profile for every company in the world.
• We’re going to have a digital representation of every job and every skill required to obtain those jobs offered through those companies.
• We’re going to have a digital presence for every higher educational organization and university that enables people to obtain those skills.
• We want to make it easy for every individual, every company and every university to share their professional development knowledge.
• In doing so, we will lift and transform the global economy.

- Jeff Weiner, CEO LinkedIn
Higher Education Waking Up

How LinkedIn’s Latest Move May Matter to Colleges

By Goldie Blumenstyk

Whether or not college leaders realize it, last week’s announcement by LinkedIn that it would spend $1.5 billion to buy Lynda.com, a provider of consumer-focused online courses, carries notable consequences for higher education.

The Case for ‘Unbundling’ Higher Education

By ROBERT LITAN

The Great Recession and its aftermath have exposed a major mismatch between the skills of many college graduates and the skills employers are seeking. If anything, as technological change marches on, this problem may get worse.
Power of the Competency Marketplace

• “People analytics”
• Enterprises track performance and career progression of employees.
• Gain clarity as to which competency profiles and individual competencies are most predictive of success for each position.
• Feedback to job description.
• Better matches for new hires: no more false positives or false negatives in final set of candidates.
• Material reduction in bad hires (est. cost ~$15k per).
• Material improvement in human capital allocation.
• Material improvement in productivity/economic growth.
## Emerging Competency Marketplaces

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Boards</strong></td>
<td>GiftedHIRE, aftercollege, Home, Looksharp</td>
</tr>
<tr>
<td><strong>Freelance Marketplaces</strong></td>
<td>toptalent, GIGSTER</td>
</tr>
<tr>
<td><strong>Advanced Job Boards</strong></td>
<td>Workshape.io, Jobbook, Virgin, FUTURES, Werkabee, vocate, Tystir, WayUp, 12Twenty, HiHandshake</td>
</tr>
<tr>
<td><strong>Career Discovery</strong></td>
<td>Hirenetics, Workshape insights, sokanu, Pymetrics, Entelo, TheMuse, Gild, HireVue, Identified, BranchOut</td>
</tr>
<tr>
<td><strong>Natural Language Processing, Machine Learning or Artificial Intelligence</strong></td>
<td>JobKred, FirstJob, Gradberry, Beanstack, Untapt, Gild, HireVue, Whitetruffle</td>
</tr>
<tr>
<td><strong>Competency Identification</strong></td>
<td>Shortlist, Credly Portfolio, JobMarketMaker, AspiringMinds, Viridis</td>
</tr>
<tr>
<td><strong>Games and Competitions</strong></td>
<td>Contests, Sqore, Knack, HackerRank</td>
</tr>
<tr>
<td><strong>Case Study or Short Courses</strong></td>
<td>Interviewed, LearnUp, Qubed, Proskey</td>
</tr>
<tr>
<td><strong>Last-mile Training</strong></td>
<td>Crowded, GradStaff, Revature</td>
</tr>
</tbody>
</table>

### Funding Stages

- **Bootstrapped**
- **Seed**
- **Series A**
- **Series B**
- **Series C-F**
- **Acquired**
We May Find...

More value in owning competency profile than in delivering postsecondary education

Major question: If competency marketplace attributes competency to you, who owns that competency?
Will Degrees Go Way Of Debutantes?

- Unclear ROI
- Too exclusive

College MVP + last-mile training could become preferred path for all but elite/out-of-touch few.
Part IV

Accelerating Change via Skin in the Game
Sources of Student Funds (Full-Time Undergrads)

- Tuition & Fees primarily funded through Direct Pay + Loans.
- States already fund $135B+.
- Situation is unsustainable.

Notes:
- "Other Aid" includes federal Parent PLUS loans, institutional graduate teaching and research assistantships, state vocational rehabilitation and job training grants, federal veterans benefits, and military tuition aid
- Tuition & Fees are inflation adjusted to 2012 $ 
Sources: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Studies
Debt Options

- Federal government reduced subsidized loans from ‘10-11 peak.
- Growth in most expensive credit (PLUS and private loans)
Current Mismatch of Interests

1. Schools paid upfront

2. Incentivizes “butts in seats”

3. Investments in “lazy rivers”

4. Poor outcomes felt only by students

5. Demand to align incentives

Lack of data / transparency drives misalignment
“Purple” Solution: Both Parties Have Same Idea

Income-Driven Repayment

Income Share Agreement
Income Share Agreements (ISAs): The Next Generation of Student Financing

Purdue University Offers Income Share Agreements as Alternative to Student Loans

BROOKINGS
Lower the risk of investing in college with Income Share Agreements

Higher Education
Some investors, universities see a return in fronting students’ tuition
The idea of taking a piece of graduates’ future earnings starts to pick up steam

Now You Can Sell Shares in Yourself to Pay for College
Kim Clark  @Money.College  Nov. 18, 2016
Taking out another high-interest private student loan seemed like the only option for Amy Weblewski this fall. The 21-year-old native of Lafayette, Ind., was working two part-time jobs and had maxed out her federal student loans. But she still needed about $13,000 more to fund her junior year at Purdue University.
Back A Boiler – Early Success

May 2016 Launch significant operational lift:
• Train financial aid officers
• Call center support for students
• Price and originate ISAs across dozens of majors
• New form of ISA contract compliant with law

First Cohort
• ~175 ISA contracts written
• $2.3M in funding
• Estimate 10% fewer private loans
• Roughly same Pell demographic as Purdue student
• Decrease dependence on private loans by ~$13,000 per student

Next Steps
• Multiple universities want to launch ISA programs
• Vemo and Purdue teaming up to expand program
• Building ISA-specific service center in Tampa due to unique nature of product

Media Attention

Getting a Student Loan With Collateral From a Future Job

The Other Debt-Free College Idea
Purdue University tries income sharing to finance higher education.

Purdue’s Income Sharing Agreement Solution To The Student Debt Crisis

Opinion / #OnCampus
AUG 30, 2016 @ 11:29 PM 5,920 VIEWS
Jon Hartley, CONTRIBUTOR
I write about macroeconomics, markets and economic policy. FULL BIO
Opinions expressed by Forbes Contributors are their own.

WSJ • New York Times • The Washington Post
CNBC • Forbes • Chicago Tribune
If Federal Government required that Title IV institutions put up $0.10 in their own (or external) capital for every $0.90 in Direct Subsidized + Unsubsidized Federal Loans

Colleges and universities would need to come up with over $8B in annual financing.
Conclusion: We Are In Agreement

Despite increasing partisanship, there’s may be more bipartisan agreement in higher education than any other area.

1. Completion is the most powerful lever
2. Bachelor’s degree “addiction” is hurting students
3. Colleges need to do much more to help graduates get great first jobs
4. Employers bear much of the blame
5. Accountability shouldn’t start and end with for-profit colleges
6. Outcomes should be about “distance traveled”
7. Technology is key to improving learning (“dynamic” classrooms)
8. Assessments are needed to save the liberal arts
9. Follow the money
10. Colleges are worth saving (especially the one you attended!)