Listening to the Job Market:
Trends, Challenges and Opportunities

Background Memo for ASU-GSV
April 2016

The Trends

More jobs are now "hybrids," combining skill sets that aren't usually taught together

- A number of positions are becoming hybrid jobs – jobs requiring skill sets from different fields, such as marketing and statistics, or design and programming.

- For example, many Marketing and PR roles now require SQL, and these roles take 17% longer to fill than Marketing and PR jobs overall. They also have considerably higher salaries. Marketing roles requiring SQL advertise salaries more than $20,000 higher, on average, than all Marketing jobs.

- Mobile app developers, data scientists, and UI/UX designers are also examples of these hybrid positions.

- These hybrid roles present new challenges because they require skills that are not typically combined in a standard degree program. As a result, credentials and micro-credentials may play a larger role in the training and job assessment landscape since they provide a faster route to proficiency in specific fields and can serve as a clear proxy for competence to employers.

	Job Counts Last 12 Months	Change From 2011	Average Advertised Salary
Web Development & Design	67,250	3%	$87,217
Digital Marketing & Marketing Automation	45,991	145%	$76,783
Mobile Development	41,032	135%	$111,380
Data Analytics	41,000	372%	$105,540
Product Management	40,752	7%	$106,471
User Interface/ User Experience (UI/UX)	29,825	15%	$99,177
All Hybrid Jobs	265,850	53%	$96,206
All IT Jobs	1,975,788	7%	$86,475

DATA: BURNING GLASS TECHNOLOGIES / GRAPHIC: GENERAL ASSEMBLY

The Trends

Employers may be generally raising the bar in middle-skill hiring

- Employers now require bachelor's degrees for a wide range of jobs, but the shift has been dramatic for some middle-skill occupations. The credentials gap (the difference between the number of postings that call for a college degree and the number of workers who have one) can amount to 25 percentage points or more for middle skill jobs in some occupational families, like Office and Administrative, or Business and Financial Operations.

- For example, 65% of job postings for Executive Secretaries and Executive Assistants now call for a bachelor's degree. Only 19% of those currently employed in these roles have a B.A.

- In some cases, employers will ask for a college degree even when it makes the position more expensive and harder to fill.

- For example, nearly one-third of postings (31%) for computer help desk roles request a bachelor's degree, but the jobs which do and do not request a B.A .specify exactly the same technical skill requirements. When requesting a B.A. in help desk roles, employers post at a higher salary, $51,622 vs $40,859, and the roles take 15% longer to fill.

Many employers may use a B.A. as a proxy for baseline skills

- Employers value "soft" or baseline skills. One in three skills requested in job postings is a "soft" or baseline skill. Even in fields like IT and engineering, one-quarter of all requested skills fall into this category.

- Jobs resist credential inflation when there are certifications or other accepted means of measuring skills, such as in health care and engineering.

- This suggests that, at least in some cases, employers are using a bachelor's degree as a proxy for baseline skills and workforce proficiency.

The Challenges

Employers struggle as demand outstrips supply in fast-growing fields, such as cybersecurity, cloud computing, and data science

- Cybersecurity is both in demand and heavily governed by certificates. Cybersecurity job postings took 8% longer to fill than IT job postings overall, and some roles within cyber – such as those requiring security clearance – remain open considerably longer.
- The demand for certificated cybersecurity talent is outstripping supply. In the U.S., employers posted 49,493 jobs requesting a CISSP, recruiting from a pool of only 65,362 CISSP holders nationwide.
- Data analytics barely existed as a field five years ago, and the positions available focused on quantitative skills. The number of postings has jumped a staggering 372% since 2011, and employers are now more interested in business analysis and other skills involved in applying data to actual decision making.
- Moreover, jobs requiring cloud-related skills such as PaaS and DBaaS are remaining open, on average, over 60 days – nearly twice as long as the market average (37-38 days).

Many bachelor's graduates will need an additional credential

- Twenty percent of job postings requiring a B.A. also require a certification, most commonly in IT or health care.

But how do educators know which certifications have value?

- There are roughly 4,000 certifications available, but the top 50 certifications in the market account for 67% of all certification demand, suggesting that most certifications have little value in the eyes of employers.

The Opportunities

Some mundane digital skills pay off in the job market

- Nearly eight in 10 (78%) middle-skill job opportunities call for spreadsheet and word processing proficiencies. Programs like Microsoft Excel have become a basic bar to entry.
- Most middle-skill job opportunities require digital literacy. These "digitally intensive" positions are growing 2.5 times faster and pay 18% higher wages on average than jobs that don't have a digital component.

Coding skills are in demand across a widening group of careers

- Seven million job openings in 2015 were in occupations which value coding skills. This corresponds to 20% of "career track" jobs, defined as those which pay at least $15/hour, considered a national living wage according to research from MIT.
- Jobs requiring coding skills pay $22,000 per year more than jobs that don't: $84,000 vs $62,000 per year. (This analysis includes only "career track jobs")
- Half of jobs in the top income quartile (>$57,000 per year) are in occupations which commonly require coding skills from job applicants. There are five job categories where candidates benefit from coding skills: IT workers, Data Analysts, Artists and Designers, Engineers, and Scientists.

With just a few additional skill sets, liberal arts majors can double the jobs available to them

- Roughly 25% of all entry level jobs requiring a bachelor's are traditionally open to liberal arts graduates (about 950,000 job postings).
- By adding one or more of eight skill sets we identified, liberal arts majors can double the entry level jobs open to them (48%) and command a $6,000 salary premium
- The skill sets include marketing, graphic design, social media, sales, general business, data analysis and management, computer programming, and IT networking. All of these can be learned with a modest amount of coursework, such as a minor, specialization, internship, or online training.

For more information, contact:

Burning Glass Technologies
1 Lewis Wharf
Boston, MA 02110
+1 (617) 227-4800
www.burning-glass.com

Scott Bittle
Director of Communications
sbittle@burning-glass.com