Saving the Liberal Arts

MAKING THE BACHELOR'S DEGREE A BETTER PATH TO LABOR MARKET SUCCESS

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Executive Summary

Rising college tuition and an uneven economic recovery have left many recent college graduates underemployed and saddled with debt. Even though the bachelor's degree has historically been a solid investment, many have begun to question whether higher education, especially liberal arts programs, has value for today's students facing an evolving economy.

To explore the questions around the value of the liberal arts, we analyze detailed information on millions of job postings and worker resumes from Burning Glass Technologies. From these data, we find that employers are looking not only for broad knowledge—that which purportedly comes from the liberal arts—but also for practical or technical skills that enable job seekers to show up job ready from day one.

We find over 3.8 million entry-level job openings in the US for graduates with bachelor's degrees, 1.4 million of which liberal arts graduates could qualify for with their existing degrees and additional, incremental skills training. Examining the 1.4 million postings more closely, we find that these entry-level employment opportunities can pay comparable earnings to other entry-level postings available only to graduates with bachelor's degrees in more specialized fields such as STEM. At the same time, the liberal arts graduates lacking identifiable and practical skills are more likely to be underemployed than other graduates and may suffer a wage penalty relative to their peers in other fields of study that may last throughout their work life.

From these findings, we argue that liberal arts graduates should master additional readily identifiable skills that can help them be more competitive in the labor market. For example, the right skills (e.g., digital design) added to the right major (e.g., fine art) can lead to a good job with a good future. The right skills depend on the career cluster students are entering, but generally adding practical or technical skills to a liberal arts foundation can enhance the prospects of graduates at time of career entry and drive earnings growth and occupational advancement over time.

Students in liberal arts programs also need to be aware that today's job market is increasingly becoming characterized by a smorgasbord of skills that should be mixed and matched to increase employment opportunities and earnings outcomes. Consider, for example, the amalgamation of skills that market research analysts, for instance, now need—data analytics skills paired with marketing expertise, which are traditionally disparate skill sets.

Thus, rather than choosing the right degree or major, liberal arts or otherwise, students need to think carefully about building the right combination of skills to launch their careers. Colleges too need to be aware how a hybridization of jobs may be contributing to a growing irrelevance of today's standard fields of study housed in traditional academic departments.

Colleges and universities can play a role by communicating these opportunities to students throughout their college careers, whether through career services, academic advising, informal advisory settings, or other institutionwide resources. Just as students must explore new ways of mastering and certifying their command of in-demand skills, colleges must explore new methods of informing students of employer needs and potential earnings outcomes and providing active career coaching for students to maximize the value of their educational experiences.

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Mark Schneider and Matthew Sigelman

Rising college tuition and an uneven economic recovery have left many recent college graduates underemployed and saddled with debt. In turn, this has brought a growing focus on the link between higher education and career outcomes. Even though the bachelor's degree has historically been a solid investment,[1] many have begun to question whether higher education, especially liberal arts programs, has value and relevance for today's students facing an evolving economy. With a flurry of headlines such as "Who Ruined the Humanities?" and "How Liberal Arts Colleges Are Failing America,"[2] these critiques often focus on culture wars that are wracking American higher education or perennial debates about how practical postsecondary education ought to be.

Here we eschew the concerns about culture wars and ask simpler questions: Are the hundreds of thousands of students graduating with degrees in the liberal arts, humanities, and related fields getting a good return on their investment of time and money in earning those degrees? If not, can students take steps to improve their outcomes? And can colleges take steps to incorporate marketable skills into the curricula of existing programs?

To explore these questions, we analyze detailed information on job postings and worker resumes from Burning Glass Technologies and show that employers clearly value core skills associated with liberal arts programs—such as critical thinking, communication, problem-solving, creativity, etc.—but that a lack of practical or technical skills may be limiting graduates' career prospects in these fields. This report identifies not only a range of high-earning occupations that can be open to liberal arts students but also the specific skills that can help unlock them.

Taking Stock of the Debate Around Liberal Arts Graduates' Outcomes

Some critics of the liberal arts note that the earnings outcomes of graduates lag those of their peers with degrees in more applied or technical fields. These observers commonly point out tales of overqualified liberal arts graduates working as baristas or cashiers, especially in the wake of the Great Recession.[3] Underemployment is indeed prevalent among recent liberal arts graduates, at least in relation to their peers with degrees in other fields. According to estimates from Jaison Abel and Richard Deitz from the Federal Reserve Bank of New York, liberal arts graduates are almost 20 percent more likely to be underemployed than college graduates overall and are far more likely to work in a low-skilled service job than graduates with majors in more quantitatively oriented and occupationally specific fields.[4]

One common argument in defense of the liberal arts, however, is that while graduates' earnings and employment prospects start out slowly relative to graduates in other fields, liberal arts graduates will experience a more rapid increase in earnings as the value of their education manifests.[5] To that point, consider Table 1,

Table 1. Median Earnings for Bachelor's Degree Completers by Selected Field of Study

Field of Study	Median Earnings (Age 25)	Median Earnings (Age 30)
Philosophy and Religious Studies	$22,923	$37,030
Liberal Arts and Humanities	**$24,687**	**$36,683**
English Language, Literature, and Composition	$25,715	$38,045
History	$28,298	$39,731
Area, Ethnic, and Civilization Studies	$28,390	$41,144
Biology and Life Sciences	$23,624	$43,663
All Majors	**$32,747**	**$45,100**
Social Sciences	$32,915	$46,287
Mathematics and Statistics	$39,087	$49,373
Business	$36,683	$49,373
Engineering Technologies	$40,116	$56,573
Computer and Information Sciences	$43,663	$57,986

Note: We only include select fields of study in this table for brevity. Earnings are in 2014 dollars.
Source: Authors' calculations using the American Community Survey, 2009–12.

which displays median earnings for graduates at age 25 and age 30 for selected fields of study, as reported by the American Community Survey.[6]

At first glance, these data reflect substantial growth in earnings for liberal arts and humanities majors, but they also indicate that graduates in these fields continue to lag behind their peers in other fields. In fact, of the programs listed in Table 2, liberal arts degree holders have the lowest median earnings at age 30.[7]

Other research suggests this earnings lag persists for liberal arts graduates compared to other fields of study, especially STEM. In 2014, the Hamilton Project reported median lifetime earnings by college major, finding that graduates in fields such as engineering, computer science, economics, operations and logistics, and finance have median lifetime earnings well over $1.5 million, whereas graduates in fields such as fine arts, sociology, music, and anthropology do not top $1 million (below average for all bachelor's degree fields).[8] Another 2014 report from the Association of American Colleges and Universities (AAC&U) examined long-term earnings outcomes for liberal arts graduates, finding that at the peak-earning ages of 56–60, median annual earnings for liberal arts graduates were $2,000 more than those with professional or preprofessional degrees ($66,185 versus $64,149).[9] However, this finding is less than meets the eye because it is driven by the earnings of the minority of liberal arts graduates with advanced degrees. The majority of liberal arts graduates with only a baccalaureate degree have median annual earnings nearly $20,000 less than those with professional or preprofessional degrees.[10] A 2018 analysis by the American Academy of Arts and Sciences shows that the job satisfaction of arts and humanities graduates compares to their peers in other fields, but the report documents large gaps in earnings outcomes and higher anxiety about money on the part of these graduates.[11]

In light of these findings, perhaps it is not surprising that, according to a report from Gallup and Strada Education Network, only 28 percent of liberal arts students reported they were confident that their knowledge and skills could lead to success in the job market—the lowest among all students surveyed.[12] The earnings data suggest these students' concerns are well grounded.

Meager postgraduate earnings outcomes mixed with buyer's remorse may contribute to another

Table 2. Percentage Change in Bachelor's Degrees Conferred by Selected Field of Study

Field of Study	Change in Number of Completions (2007–16)	Number of Completions (2016)
Philosophy and Religious Studies	–15%	10,147
Liberal Arts and Humanities	**–4%**	**43,641**
English Language, Literature, and Composition	–22%	42,728
History	–25%	25,464
Area, Ethnic, and Civilization Studies	–4%	7,834
Biology and Life Sciences	55%	113,665
Mathematics and Statistics	54%	22,727
Social Sciences	6%	135,048
Business	24%	370,000
Engineering Technologies	704%	16,512
Computer and Information Sciences	85%	64,267
All Majors	**31%**	**— ***

Note: * Total completions are not listed for all majors to not confuse the reader because several fields of study are omitted in the table for brevity. Number of completions represents total first-major bachelor's degrees conferred by Title-IV participating, four-year institutions during the 2007–08 and 2015–16 academic years.
Source: Authors' calculations using Integrated Postsecondary Data System, 2007–08 and 2015–16.

troubling trend for the liberal arts: waning interest.[13] Over the past decade, the number of bachelor's degrees American colleges awarded in the liberal arts and related fields has significantly declined compared to other fields. Table 2 reports the change in the number of completers in selected fields of study between the 2007–08 academic year—just before the Great Recession—and the 2015–16 academic year.

Nationwide, the number of bachelor's degree completers increased by 31 percent over that time frame. Yet the number of graduates in the liberal arts and related fields fell, often substantially. For instance, there was over a 20 percent decline in the number of history and English degree conferrals, followed by a 15 percent decline in philosophy graduates.[14]

Paradoxically, even as degrees in traditional liberal arts fields are marked by low earnings and declining interest, employers are vocal and consistent in demanding workers with the skills considered central to liberal arts programs. A 2013 AAC&U survey of employers found that 80 percent agreed that all students should acquire broad knowledge in the liberal arts and sciences.[15] Another 2017 survey of employers by the National Association of Colleges and Employers found that among the top attributes sought on candidates' resumes were problem-solving (77 percent of respondents) and written and verbal communication skills (75 and 71 percent, respectively)[16]—the hallmarks of a traditional liberal education.[17] However, the data on earnings outcomes suggest that such knowledge or skills may not necessarily be enough.

As our analysis in the following pages indicates, employers are looking not only for broad knowledge—that which purportedly comes from courses of study in the liberal arts—but also for practical or technical skills that will enable job seekers to show up job ready from day one.

We believe that it is incumbent on liberal arts graduates to master additional skills that can help them be more competitive in the labor market. These readily identifiable skills can enhance the prospects of liberal arts graduates at the time of career entry and drive growth in earnings and occupational advancement over time. Furthermore, we argue that institutions

of higher education must look inward to ensure they are offering students ample skills-building opportunities while actively communicating information on in-demand skills and occupations.

But which occupations should liberal arts students target? And perhaps more importantly, which skills will help them compete in the labor market? We now turn to Burning Glass Technologies' proprietary database of job postings and resumes to help identify these occupations and skills.[18]

Mapping the Jobs Ecosystem for Graduates with Bachelor's Degrees

In this analysis, we aim to identify a set of occupational categories that represent potential employment opportunities for liberal arts graduates. Our intent is not to dissuade students from pursuing a field of study for which they have a passion. Rather we aim to identify discrete skills that could be added to a traditional course of study in the liberal arts that can increase students' marketability and earnings.

We start by identifying a set of occupations that represent entry-level opportunities for all college graduates, defined as occupations requiring a college degree and less than five years of experience, as determined by the Bureau of Labor Statistics (BLS).[19] Next, we eliminate occupations with no measurable demand for bachelor's-level candidates—that is, we eliminate occupations that are only viable targets for those with advanced or professional degrees or sub-baccalaureate degrees. We thus only consider the broad set of jobs requiring college-level skills for which bachelor's graduates may qualify, a total of 3.8 million unique entry-level job postings over the past year.

We then parse out the remaining occupations that typically require degrees in certain specialized fields (e.g., engineering or accounting) from those that do not. Doing so allows us to isolate the universe of jobs that liberal arts graduates can feasibly target—either with their existing degrees alone or by acquiring additional, incremental skills via nondegree training, an internship in a related field, adding a minor, or related avenues. We refer to the former cluster of occupations as "specialized jobs" and the latter cluster as "nonspecialized jobs." See Appendix A for a more detailed explanation of our methodology.

Our data show that, over the past year, roughly 1.4 million entry-level openings did not require a specialized degree for which liberal arts graduates could potentially qualify. These postings represent over one-third of all entry-level postings available to graduates with bachelor's degrees found in the Burning Glass database.

Our data also suggest that liberal arts graduates, with some additional skills training, can potentially realize earnings comparable to those of their more specialized counterparts. Table 3—which measures what liberal arts graduates could make if they were to add the right skills—shows that the average early-career salary of jobs potentially open to liberal arts graduates is virtually identical to that of more specialized jobs or roles. (Again, see Appendix A for the method for calculating average early-career earnings.)

However, the consistent gap in actual earnings between liberal arts graduates and their peers with degrees in other fields, as described earlier in the report, suggests that many opportunities to achieve better earnings outcomes are going unrealized. In other words, thousands of liberal arts graduates are leaving substantial amounts of money on the table.[20]

Which Career Options Could Be Liberal Arts Graduates' Best Opportunities?

For the rest of the analysis, we focus particularly on the collection of 1.4 million nonspecialized job postings potentially open to liberal arts graduates. For these graduates to improve their success in the job market, they must look to develop certain skills that can unlock a range of higher-paying career options.

From these 1.4 million postings, we identify 10 career clusters that liberal arts graduates could target that offer them the best employment and advancement potential: business administration, data analysis and data management, human resources, information technology (IT) and networking, sales, programming

Table 3. Entry-Level Opportunities for Bachelor's Graduates by Specialized and Nonspecialized Jobs

Category	Entry-Level Openings: October 2016–September 2017	Share of B.A. Entry-Level Openings	Average Potential Early-Career Salary
All B.A.-Level Jobs	3,818,246	100%	$50,668
Nonspecialized Jobs Open to Liberal Arts Graduates	1,367,532	36%	$50,514
Specialized Jobs	2,455,263	64%	$50,834

Note: Nonspecialized jobs represent occupations that typically require a college degree but do not necessarily require a specific major. Specialized jobs represent occupations that typically require a college degree in a specific major. Average potential early-career salary represents either the mean salary for occupations requiring no previous experience or the 25th percentile salary for occupations requiring less than five years of experience, as derived from BLS data. See Appendix A for more information on the methodology.

Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017; and Bureau of Labor Statistics, Occupational Employment Statistics, 2017.

and software development, finance, marketing and PR, design, and media and communication. These clusters were identified by analyzing these online job openings and grouping-related occupations with similar skill profiles that represent strong career opportunities for liberal arts graduates. For more information about how these clusters were identified, see Appendix A.

In these 10 career clusters, we then pull out examples of certain occupations and the skills therein that are required to secure employment in those occupations. Table 4 shows occupations and commonly required skills in each of these 10 career clusters. Note that the examples of occupations and skills are not exhaustive and that an occupation can appear in several career clusters.

Quantifying the Opportunity for Liberal Arts Graduates

Although each of the 10 career clusters we identify in our analysis could afford liberal arts graduates strong employment opportunities, they can lead to radically different earnings outcomes and employment opportunities.

In Table 5 we display data on the number and growth of jobs in these career clusters, the number of entry-level positions, and the percentage of entry-level positions filled by liberal arts graduates. These data help highlight some of the best potential entry-level opportunities for liberal arts graduates.

As shown in Table 5, business administration offers the greatest number of entry-level openings. However, other clusters, such as data analysis and data management or programming, are growing faster or, as evident in Table 5, offer higher average salaries.

This kind of labor market information presents both opportunities and challenges for students and their colleges. Individual students need to determine the best career clusters to target based on their interests and skills. Indeed, a student with a comparative skills advantage geared toward a certain lower-paying field may not realize a better outcome by seeking additional training to enter a different higher-paying field.[21] But there is also a need for colleges to help students identify the best opportunities regionally or nationally that are consistent with student interests and skills. Unfortunately, as a recent Gallup study shows, students struggle to find good advice from informational resources on their campuses.[22]

There are several themes that emerge from our data that can help students better prepare for and succeed in the job market and that can help colleges improve their advising.

Demand for Communication and Human-Centric Skills. As more technical and repetitive tasks are becoming automated, the relative value of

Table 4. Sample Occupations and Skills by Career Cluster

Career Cluster	Sample Occupations	Sample Skills
Business Administration	• Management Analysts • Business Operations Specialists • Purchasing Agents	• Business Administration • Business Analysis • Budgeting • Business Process • Project Management
Data Analysis and Data Management	• Database Administrators • Budget Analysts • Management Analysts	• SQL • Forecasting • Data Analysis • Database Administration • Economics
Human Resources	• Human Resources Specialists • Human Resources Assistants • Compensation and Benefits Specialists	• Recruiting • Onboarding • Applicant Tracking Systems • Employee Relations • Human Resources Information Systems
IT and Networking	• Computer Network Support Specialists • Information Security Analysts • Computer Systems Analysts	• Technical and Help Desk Support • SQL • Linux • System Administration • Information Security
Sales	• Sales Representatives • Securities and Financial Services Sales Agents • Sales Engineers	• Sales Techniques • Sales Management • Business Development • Prospecting • Salesforce
Programming and Software Development	• Software Developers • Web Developers • Computer Programmers	• Java • SQL • Software Development and Engineering • Linux • Object-Oriented Analysis and Design
Finance	• Financial Analysts • Credit Analysts • Personal Financial Advisers • Actuaries	• Financial Analysis • Accounting • Forecasting • Financial Reporting • Financial Advising
Marketing and PR	• Market Research Analysts and Marketing Specialists • PR Specialists • Advertising and Promotions Managers	• Marketing • Social Media • Email Marketing • Digital Marketing • Market Strategy

Table 4. Sample Occupations and Skills by Career Cluster (continued)

Design	• Graphic Designers • Industrial Designers	• JavaScript • Adobe Photoshop • Graphic Design • Adobe InDesign • Website Design
Media and Communication	• Writers and Technical Writers • Editors • Reporters • Film and Video Editors	• Technical Writing and Editing • Journalism • Social Media • Copywriting • Broadcasting

Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017.

other skills—such as communication and creativity—grows. Research over the past few years documents the labor market return to "noncognitive" skills, including social skills and leadership skills.[23] In a recent National Bureau of Economic Research report, Harvard professor David Deming describes how the labor market returns for social skills have increased dramatically in the past few years, concluding that "social skills have become more important over time, and that growth in the return to social skills has been greater for workers who sort into social skill-intensive occupations."[24]

Table 5. Summary Statistics by Career Cluster

Career Cluster	Entry-Level Openings	Total Employment	Projected Employment Growth	Share of Entry-Level Jobs Filled by Liberal Arts Graduates
Business Administration	276,199	2,981,230	7%	33%
Data Analysis and Data Management	224,607	2,073,630	15%	32%
Human Resources	191,164	1,090,280	6%	36%
IT and Networking	173,691	1,947,960	10%	16%
Sales	157,127	1,121,710	6%	36%
Programming and Software Development	144,581	1,604,560	18%	10%
Finance	125,980	1,402,750	10%	30%
Marketing and PR	106,550	910,280	17%	50%
Design	49,047	391,400	8%	54%
Media and Communication	25,761	295,890	2%	83%

Note: Entry-level job openings are from October 2016 to September 2017. Total employment represents total individuals employed in that career cluster. Projected employment growth by career cluster is from 2016 to 2026. Share of entry-level jobs filled by liberal arts graduates represents the percentage of entry-level jobs filled by liberal arts graduates in each career cluster for all individuals found in Burning Glass' database of worker resumes. See Appendix A for more information on the methodology.
Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017; Bureau of Labor Statistics, *Occupational Outlook Handbook*, 2017; and Bureau of Labor Statistics, Occupational Employment Statistics, 2017.

In fact, as our analysis shows, the three clusters with the largest share of entry-level jobs filled by liberal arts graduates—marketing and PR, design, and media and communication—all emphasize communication and creativity. This suggests that liberal arts graduates should be well positioned for success in a workforce that is somewhat increasingly human centric.[25] However, these are also the three smallest clusters in terms of employment and entry-level demand. Larger and often faster-growing clusters—such as business administration, human resources, and programming and software development—all have smaller shares of liberal arts graduates in entry-level roles, suggesting that there may be untapped opportunities for liberal arts graduates to target these fields by adding specific technical expertise to whatever traditional skills they have acquired.

Hybridization of Jobs. As new technologies and business models transform the workplace, the skill mix employers require is becoming more diverse and is blending together in new combinations. We think of this growing mixing and matching of skills as "hybridization"—where some of the fastest-growing careers require combining skills that were traditionally isolated in specific occupations.[26]

Consider the amalgamation of skills market research analysts need. This occupation requires data analytics skills paired with marketing expertise—traditionally disparate skill sets. This hybridization creates roles that do not align with traditional degree programs, in the liberal arts or otherwise. Similarly, an entry-level graphic designer role often requires a mix of strong visual design sense, knowledge of specific software packages, web development skills, and marketing expertise. Students will be unlikely to find all these skills blended in a single degree program. As such, liberal arts students may be able to compete for these roles on equal footing with their more specialized peers, provided that they acquire the required technical competencies.

Growth of Digital Skills. One of the key drivers of workforce hybridization is the increasing prevalence of digital technologies across industries, which in turn requires a more digitally literate workforce. That programming and software development is the fastest-growing career cluster of all those we identified as potential targets for liberal arts students shows this. Other fast-growing categories, such as marketing and PR and data analysis and data management, are increasingly digitally driven. Students in liberal arts programs can tap into these job opportunities by adding computer science, statistics, and other quantitative electives to the traditional core courses required of their majors.

As these new technical skills continue to drive the creation of hybrid jobs, the right mix of skills—rather than traditional majors—will become the primary currency that employers will value when hiring new graduates.[27] Because of the broad foundation of knowledge and skills that should be developed in traditional liberal arts courses, graduates of the programs may be well positioned to qualify for hybrid jobs, *but only if they develop and can demonstrate relevant sets of digital, technical, or practical skills.*

Liberal Arts Graduates Can Earn More Competitive Wages

If liberal arts graduates take steps to develop certain marketable skills, their earnings could converge toward those of graduates with degrees in more applied or technically oriented majors. This underscores the need for liberal arts graduates to consider the earning potential that each career cluster presents, both when they graduate and later in their careers.

Table 6 displays the average early-career salaries and average expected salaries after five years for bachelor's degree holders hired in the 10 career clusters identified earlier in this analysis. Early-career salaries are defined as either the average salary for occupations the BLS defines as requiring no previous experience or the 25th percentile salary for occupations requiring less than five years of experience. Expected salary after five years is based on transitions listed in Burning Glass' database of worker resumes, which includes over 78 million resumes collected from various sources.

Table 6. Early-Career and Five-Year Expected Salaries by Career Cluster

Career Cluster	Average Early-Career Salary	Expected Salary in Five Years	Five-Year Salary Premium
Business Administration	$51,067	$77,360	$26,293
Data Analysis and Data Management	$55,979	$82,070	$26,091
Human Resources	$42,157	$70,147	$27,990
IT and Networking	$55,094	$75,837	$20,743
Sales	$59,907	$92,320	$32,413
Programming and Software Development	$73,128	$87,811	$14,683
Finance	$52,524	$80,954	$28,430
Marketing and PR	$44,324	$75,395	$31,071
Design	$40,745	$66,957	$26,212
Media and Communication	$39,422	$68,283	$28,861
Average Liberal Arts Graduate	$38,781	$63,216	$24,435
Average STEM Graduate[28]	$49,494	$76,556	$27,062
Average for All Graduates	$41,880	$68,513	$26,633

Note: Average early-career salary represents either the mean salary for occupations requiring no previous experience or the 25th percentile salary for occupations requiring less than five years of experience. See Appendix A for a more detailed explanation of our methodology.
Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017; and Bureau of Labor Statistics, Occupational Employment Statistics, 2017.

To calculate these numbers, we looked at workers with liberal arts degrees who started their careers in a given career cluster and calculated the percentage who ended up in specific occupations five years later. We then took the average salaries for occupations that workers listed five years after starting their careers and weighted them by the share of workers who started their careers in a specific career cluster and transitioned into each occupation. This measure is effectively the average salary of the occupations that workers may end up in five years after starting their careers, weighted by the likelihood they end up in each occupation. Again, see Appendix A for a more detailed explanation of our methodology.

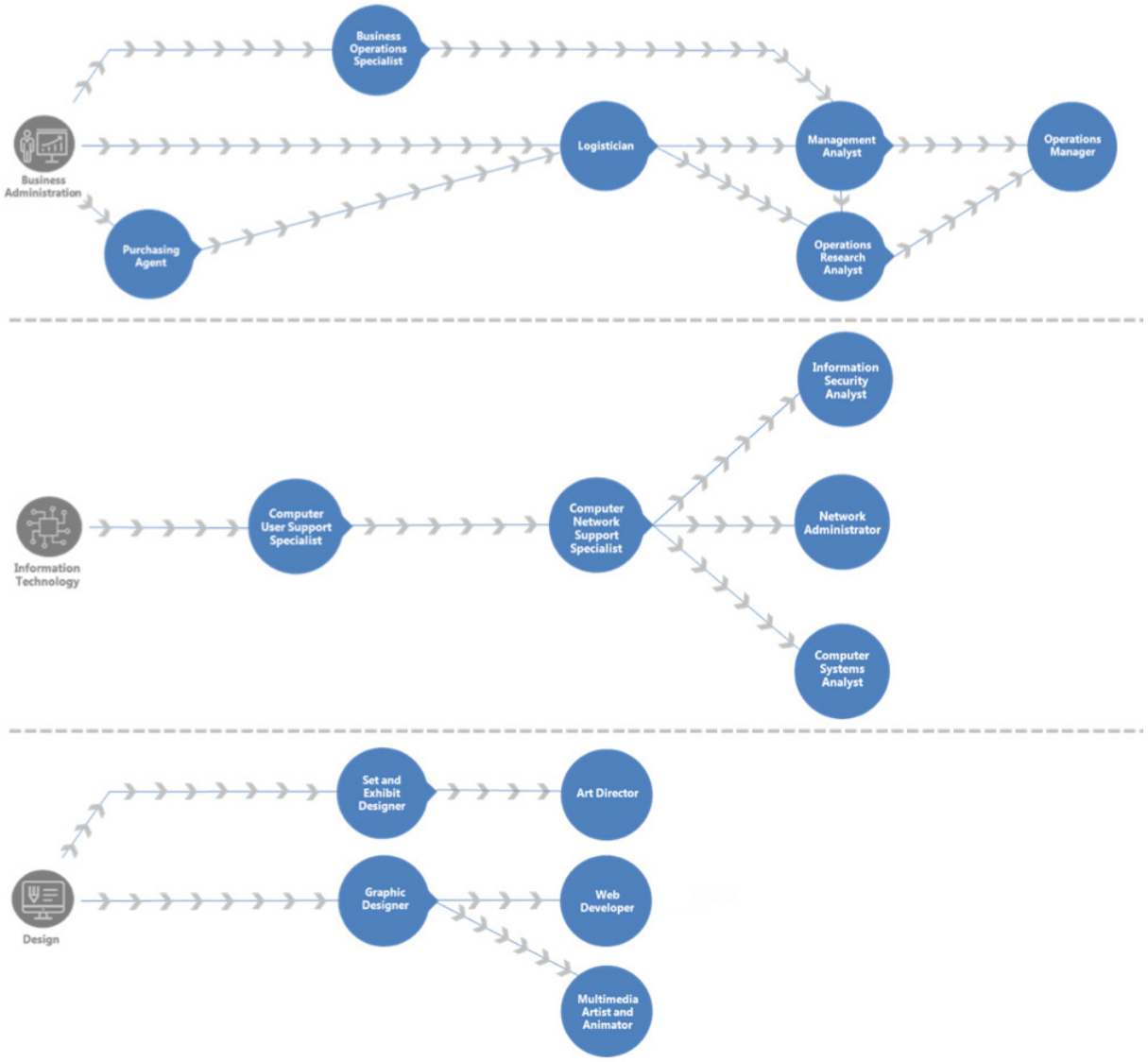
For example, the fastest-growing category, programming and software development, also has the highest average early-career salary: over $73,000. However, sales and marketing and PR have the two largest average salary bumps after five years, with the average worker in each cluster seeing his or her salary increase by over $30,000.

In short, many career clusters potentially open to liberal arts graduates offer early- and mid-career salaries comparable to those attainable by all bachelor's graduates and even graduates of STEM programs, who are consistently among the highest-earning graduates.

Targeting Defined Career Pathways Is Key to Advancement

Finally, for liberal arts graduates to realize greater earnings over time, they should consider targeting careers with upward trajectories, and they must plan for and manage their progression carefully. Doing so also serves as a safeguard against costly and time-consuming career changes. A first job can have a lasting career impact, so it is crucially important that students—and the colleges that instruct and advise them—take a forward-looking posture when weighing postgraduation job opportunities.

Figure 1. Sample Career Pathways in Career Clusters for Liberal Arts Graduates



Note: See Appendix B for some of the common transition opportunities that workers may target in each career cluster.
Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017.

Earlier in the analysis we identified 10 career clusters using information from job postings potentially open to liberal arts graduates. An analysis of worker transitions listed in a separate Burning Glass database of 78 million resumes shows that, in each career cluster, there are opportunities for liberal arts graduates to transition along well-defined career pathways into progressively higher-responsibility, higher-paying roles. (See Appendix A.)

Figure 1 shows just a few sample career pathways that liberal arts graduates may consider, while Appendix B lists some of the common transition opportunities that workers may target in each career cluster once they have developed the requisite skills. In other words, our analysis of resumes shows that clearly defined career paths with upward trajectories do exist for liberal arts graduates who build skills and experience around in-demand career domains.

Implications and Recommendations

Every year, hundreds of thousands of students graduate with bachelor's degrees in the traditional liberal arts or related fields of study. While many find themselves on track for long-term success, many others find themselves underemployed and often in need of even more education to secure a lifetime of family-sustaining wages.

Like many arguments based on longitudinal data, the perennial critique of the labor market value of these degrees is based on the assumption that history is destiny. However, right now, and perhaps throughout their careers, liberal arts graduates on average suffer a wage penalty relative to graduates with more applied or technical degrees. While some evidence suggests that over time that wage penalty may lessen, that is cold comfort to new graduates facing tens of thousands of dollars in student debt and earning thousands of dollars less than their peers.

But despite the current low earnings of recent graduates in these fields, asking "Are the liberal arts worth it?" is the wrong question. Today's job market is increasingly becoming characterized by a smorgasbord of skills that need to be mixed and matched to increase opportunities and earnings—and increasingly, today's "standard" fields of study need to be transformed. Rather than choosing the "right" degree or major, students need to choose the right combination of skills to launch their careers. And they need to think about how best to communicate and certify to employers that they indeed have these skills.

In today's labor market, college majors serve as a shorthand for what a graduate knows and can do. But as the labor market continues to evolve, other skills-building mechanisms—such as nanodegrees, badges, boot camps, experiential or work-based learning, and internships[29]—may supplement or even supplant the noisy signals that college degrees and majors now offer. These alternative credentialing mechanisms can more precisely indicate skills that make a graduate job ready.[30] That evolution will advance along with the deployment of real-time labor market information that will make clearer to students, colleges, and employers the skills that are in greatest demand.

As we have outlined in this report, liberal arts graduates have ample employment opportunities potentially available to them, but they must know how to find and qualify for them. In a previous report, "Rebooting Jobs: How Computer Science Skills Spread in the Job Market," Burning Glass researchers found that computer science and analytic skills—such as programming, data analysis, or computer networking—are spreading to new career areas, such as marketing and design. In these career areas, nearly two-thirds of the fastest-growing and highest-paying skills were related to computer science and analytics, but only 18 percent of these jobs specifically requested a computer science degree.[31] Other previous research from Burning Glass also found that "career-track" jobs—defined as those that pay a national living wage of $15 per hour or greater—that call for programming skills command a pay premium of $22,000 over other career-track jobs.[32] This again underscores the value of skills, rather than just degrees, in the eyes of employers. Students in liberal arts programs should develop a plan to ensure that they have the technical skills that will complement their program of study and allow them to qualify for more entry-level job opportunities more easily.

Colleges and universities can also play a role by communicating these opportunities to students throughout their college careers, whether through career services, academic advising, informal advisory settings, or other institutionwide resources. The 2016 Gallup survey referenced earlier found that only 16 percent of respondents found the career services office at their alma mater to be "very helpful." At the same time, of those 16 percent of respondents, 60 percent reported their university prepared them well for life outside college, and 72 percent reported that their education was worth the cost.[33]

Colleges would be wise to explore new methods of informing students of skills demands and potential earnings outcomes and providing active career coaching for students so as to maximize the value of their educational experiences. One clear example comes from the Launch My Career website—a consumer information tool for postsecondary institutions in Florida, Colorado, Texas, and Tennessee—which highlights

the monetary value of adding specific skills to specific majors or fields of study. For example, according to the Launch My Career Florida website, the first-year earnings of Florida Atlantic University graduates with an English major is around $32,000; yet the website notes that graduates who add "account management skills" (i.e., skills associated with sales-related positions) to the degree can more than double their expected earnings.[34] This kind of work combines the detailed data on earnings and skills uncovered by Burning Glass with a student-facing consumer-oriented website helping identify the highest-value skills students can add to their studies.

While Launch My Career is a state-supported effort, we are also beginning to see institutions take seriously their responsibilities toward the career outcomes of their students by increasing the emphasis on skills and employability through their educational offerings. Some institutions are developing new liberal arts programs or majors in response to cross-cutting skills demands. Emory University, for instance, has recently developed the Institute for Quantitative Theory and Methods in its College of Liberal Arts and offers new bachelor's degree programs in quantitative social sciences and public policy analysis. Emory touts that liberal arts graduates with data management and analysis skills earn $12,700 more annually than those without such skills.[35]

Some colleges infuse work directly into liberal arts programs. Consider co-op (cooperative education) programs: Co-ops present an opportunity for students to gain valuable work experience that can both build practical skills and help shape future career aspirations. Typically, students who participate in co-ops alternate semesters of academic study with months-long terms of full-time employment, sometimes with the option of completing two co-ops over four years or three co-ops over five. Co-ops are easy to imagine for students pursuing technical degrees,[36] yet Northeastern University's College of Social Sciences and Humanities (CSSH) also provides similar opportunities for experiential learning for its liberal arts students. Students in Northeastern's CSSH can gain up to 18 months of professional or research experience related to their academic interests working with Northeastern's more than 2,500 employer partners, such as the Massachusetts attorney general's office, Hasbro, and Interpol.[37] As the focus on skills and employment outcomes continues to grow, co-ops may become more common, visible, and valuable as a means for liberal arts students to build and demonstrate skills while both in the classroom and on the job.

Other institutions are keeping their liberal arts programs largely intact but are crafting career-oriented complements around them. The University of Utah has started its Degree Plus program, a new series of short-term, postbaccalaureate certificates for its liberal arts graduates in areas such as data analysis, instructional design, content marketing and management, operations analysis, and digital communications tools. The programs take six to eight weeks to complete, cost $1,499, and are taught by a group of subject-matter professionals paired with mandatory, in-person career coaching.[38] Susquehanna University, after seeing steep enrollment declines in their English program, instead launched several professionally oriented English minors based on the career tracks of successful alumni. Its new publishing and editing minor became so popular with students that they ultimately repackaged it into a full major itself.[39] Davidson College recently announced a strategic partnership with Revature, a technology talent development company, to provide a tuition-free online coding program to Davidson students and recent graduates. The coding courses entail 12 weeks of immersive, industry-aligned coding curricula, featuring 18 courses on Java, Microsoft.NET, and additional front-end development languages, with real-world exercises and a personal mentor, culminating in a professional industry certification.[40]

Each of these efforts differs in emphasis and pedagogy, and none should be considered the best or most effective approach—in fact, many of these nascent innovations have not had sufficient time for evaluation. Rather we highlight them because they represent fresh thinking and share a common goal of exposing liberal arts students to relevant and high-demand skills and the world of work.

Conclusion

With the majority of liberal arts graduates now receiving degrees in majors that do not line up with a specific career, high demand or otherwise, skills have become a crucial factor in demonstrating job-market readiness. Schools must offer more opportunities for students to build in-demand skills through strategic curriculum development, the development of work-based learning opportunities such as internships or co-ops, and stronger ties with local employers.[41] This may be a particularly difficult challenge for colleges and universities that have tended to structure themselves around departments focused on traditional or broad-based skills.

Our analysis reveals that four general career clusters—IT, business and communications, design, and analysis—present the fastest-growing opportunities for liberal arts graduates. But occupations in each of these fields depend on cross-cutting, hybrid skill sets. Liberal arts students can improve their employment prospects by developing a versatile portfolio of identifiable skills that will give them an advantage in competing for an increasing number of hybrid roles requiring skills from disparate functional domains. In sum:

- These hybrid skills can complement those that constitute the foundation of a good liberal arts education.
- Colleges and departments must rise to the challenge by designing additional coursework, such as minors and short-term training programs, or experiential learning opportunities, such as internships and co-ops.
- With the help of their colleges, liberal arts students should know that there are large payoffs for adding high-demand skills that can fit with their muse. Not everyone needs to become an engineering or math graduate to find a good career with strong wages. The right skills (e.g., digital design) added to the right major (e.g., fine art) can lead to a good job with a good future.

A liberal arts education is not dead, nor is it necessarily a dead end. Rather a good liberal arts education must provide students with a strong set of foundational analytic and communications skills. But students need to consider how to add identifiable practical or technical skills to that foundation to make family-sustaining wages and to advance to high-paying job opportunities, and colleges need to ensure they do all they can to get students there.

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Appendix A: Data and Methodology

Online Job-Posting Data from Burning Glass Technologies

To supplement traditional sources of labor market data with more detailed information on employer demand for jobs and skills, Burning Glass mined its comprehensive database of over 150 million unique online job postings dating back to 2007. Burning Glass' "spidering" technology extracts information from close to 50,000 online job boards, newspapers, and employer sites on a daily basis and deduplicates postings for the same job, whether it is posted multiple times on the same site or across multiple sites. At minimum, 80 to 90 percent of job postings are posted online and captured by Burning Glass' technology.

Burning Glass applies detailed text analytics to code and extract granular data from job postings. This approach contextualizes each job posting and therefore can extract more relevant data than keyword-based approaches. For example, Burning Glass software distinguishes among budget analysis as a skill, a contractor who must complete jobs on time and on budget, and a clerk at Budget Rent a Car. Burning Glass maintains a team of analysts who constantly monitor labor market trends to identify new and emerging skills and include them in the coding rules and taxonomies.

Burning Glass' proprietary data are supplemented by additional indicators from BLS and other published sources. All Burning Glass online job-posting data in this analysis reflect the 12-month period from December 2016 through November 2017.

Resume Data from Burning Glass Technologies

This study also uses data from Burning Glass Technologies' proprietary database of more than 78 million resumes to evaluate common career transition opportunities for workers with different education and occupational backgrounds. Resumes were sourced from various Burning Glass partners, including recruitment and staffing agencies, workforce agencies, and job boards. Burning Glass applies the same detailed text analytics on resumes that it uses to code and extract data from job postings.

Admittedly, not all jobs require a resume as a part of their application, and not all workers actively look for jobs. As a result, resumes may be representative of workers with career aspirations to move into professional roles, which may not be true for many liberal arts graduates. Additionally, using Standard Occupational Classification (SOC) codes prevents insight into the dynamics of advancement in occupations. For example, entry-level workers may receive a substantial wage increase in their current role when they secure a certain credential or certification or develop a new skill.

Definition of Liberal Arts Degrees

For the purposes of all analyses listed in this report, liberal arts degrees are defined as those from one of the Classification of Instructional Programs (CIP) codes from the US Department of Education. (See Figure A1.)

Identifying Occupations Liberal Arts Graduates May Target

The first step in quantifying job opportunities for liberal arts graduates is to define the set of jobs for which they may qualify upon graduation. To do this we use SOC job classifications from the BLS and the corresponding education and experience requirement flags from the BLS' *Occupational Outlook Handbook* to identify the universe of jobs bachelor's graduates may target. Occupations are included in this universe of bachelor's-level jobs if they are determined by the

Table A1. Classification of Instructional Programs for Liberal Arts and Related Programs

CIP Code	CIP Title
5	Area, Ethnic, Cultural, Gender, and Group Studies
9	Communication, Journalism, and Related Programs
10	Communications Technologies Technicians and Support Services
16	Foreign Languages, Literatures, and Linguistics
19	Family and Consumer Sciences
23	English Language and Literature/Letters
24	Liberal Arts and Sciences, General Studies, and Humanities
30	Multi/Interdisciplinary Studies
33	Citizenship Activities
36	Leisure and Recreational Activities
45	Social Sciences
50	Visual and Performing Arts
54	History

Source: US Department of Education, Integrated Postsecondary Data System, 2016.

BLS to require either a bachelor's degree or associate's degree and less than five years of experience.

The decision to include jobs only requiring an associate's degree enables inclusion of occupations that require college-level skills and are sometimes, but not always, filled by workers with a bachelor's degree and may represent viable career options for bachelor's-level candidates, such as web developers. However, this also includes some jobs with virtually no demand for workers with bachelor's degrees, such as truck drivers. Therefore, we eliminated occupations with less than 5 percent of job postings calling for bachelor's-level candidates so that our analysis would only focus on viable targets for bachelor's graduates.

Finally, we filtered out occupations that typically require specific specialized degrees—such as engineers or accountants—defined as occupations that either have fewer than 10 percent of workers in Burning Glass' resume database possessing a liberal arts degree or as otherwise determined upon manual review by Burning Glass analysts. This isolates the universe of jobs that liberal arts graduates can target, either with their existing degrees or by acquiring additional skills through nondegree training, finding an internship in a related field, adding a minor, or other avenues.

Identifying Career Clusters That Liberal Arts Graduates May Target

Once we identified the set of college-level occupations that liberal arts graduates may target, we identified career clusters in this set of occupations that represent strong opportunities for liberal arts graduates to not only get a job but also build a career. These clusters were identified by Burning Glass analysts who analyzed online job openings from Burning Glass' database of hundreds of millions of job postings to group-related occupations with similar skill profiles that are open to liberal arts graduates, offer opportunities to build transferrable skills, and provide sustainable employment and advancement opportunities, as determined by analyzing job transitions listed in Burning Glass' resume database. For example, finance is comprised of a cluster of 12 occupations that all can be filled by liberal arts graduates, require finance-related skills, and routinely serve as stepping stones into more advanced finance-related roles.

Share of Entry-Level Jobs Filled by Liberal Arts Graduates

The percentage of entry-level jobs filled by liberal arts graduates in each career cluster is calculated by counting the number of workers in Burning Glass' resume database who possess a bachelor's degree in one of the CIP codes defined as liberal arts and list their first job in a particular career cluster. The number of workers satisfying these criteria is then divided by the total number of workers in Burning Glass' resume database who list their first job in the same career cluster and multiplied by 100.

Average Early-Career Salaries

Early-career salaries are defined as the average salary for occupations the BLS defines as requiring no previous experience. For occupations the BLS defines as requiring some experience, but less than five years of experience, the early-career salary is defined as the 25th percentile of all salaries in an occupation. All salaries come from the BLS' Occupational Employment Statistics.

Expected Salaries in Five Years

The expected salary in five years is based off transitions listed in Burning Glass' database of worker resumes. First, we looked at workers with liberal arts degrees who started their careers in a given career cluster and calculated the percentage who ended up in specific occupations five years later. We then took the average salaries for occupations workers listed five years after starting their careers and weighted them by the share of workers who started their careers in a specific career cluster and transitioned into each occupation. Therefore, this measure is effectively the average salary of the occupations that workers may end up in five years after starting their careers, weighted by the likelihood they end up in each occupation. All salaries come from BLS' Occupational Employment Statistics.

Skills

Skills describe the abilities and knowledge areas that workers can possess. In job postings, skill requirements can be found throughout each posting, especially in sections describing job duties and required qualifications. Individual skills can be expressed in diverse ways (e.g., Microsoft Excel versus MS Excel), and the Burning Glass team has defined a constantly growing list of skill names that serves to standardize the different variants of a skill into discrete entities and a set of rules that perform that standardization.

Appendix B: Sample Occupations and Transition Opportunities by Career Cluster

Burning Glass identified transition opportunities in each career cluster by analyzing its database or resumes to calculate the most common next-step occupations for workers who began their careers in one of the 10 career clusters. Next, Burning Glass identified common next-step occupations in each career cluster that represent career advances—in terms of either higher salary or experience requirements—and leverage similar skills to those in each career cluster.

Table B1. Sample Occupations and Transition Opportunities by Career Cluster

Career Cluster	Sample Occupations	Sample Transition Opportunities
Business Administration	• Management Analysts • Business Operations Specialists • Purchasing Agents	• Human Resource Managers • General and Operations Managers • Marketing Managers
Data Analysis and Data Management	• Database Administrators • Budget Analysts • Management Analysts	• Market Research Analysts • Marketing Managers • Financial Managers
Design	• Graphic Designers • Industrial Designers	• Web Developers • Art Directors • Multimedia Artists and Animators
Programming and Software Development	• Software Developers • Web Developers • Computer Programmers	• Computer Systems Analysts • Database Administrators • Computer and Information Systems Managers
Finance	• Financial Analysts • Credit Analysts • Personal Financial Advisers • Actuaries	• Financial Managers • General and Operations Managers • Securities and Financial Services Sales Agents
Human Resources	• Human Resources Specialists • Human Resources Assistants • Compensation and Benefits Specialists	• Human Resources Managers • General and Operations Managers • Supervisors of Office and Administrative Workers
IT and Networking	• Computer Network Support Specialists • Information Security Analysts • Computer Systems Analysts	• Network and Computer Systems Administrators • Database Administrators • Computer Network Architects

Table B1. Sample Occupations and Transition Opportunities by Career Cluster (continued)

Career Cluster	Sample Occupations	Sample Transition Opportunities
Marketing and PR	• Market Research Analysts and Marketing Specialists • PR Specialists • Advertising and Promotions Managers	• Marketing Managers • Public Relations Managers • Sales Managers
Media and Communication	• Writers/Technical Writers • Editors • Reporters • Film and Video Editors	• Market Research Analysts and Marketing Specialists • Public Relations Specialists • Producers and Directors • Marketing Managers
Sales	• Sales Representatives • Securities and Financial Services Sales Agents • Sales Engineers	• Sales Managers • Technical Sales Representatives • Marketing Managers

Source: Authors' calculations using proprietary data from Burning Glass Technologies, 2017.

Notes

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5. See Allie Grasgreen, "Liberal Arts Grads Win Long-Term," Inside Higher Ed, January 22, 2014, www.insidehighered.com/news/2014/01/22/see-how-liberal-arts-grads-really-fare-report-examines-long-term-data.

6. The American Community Survey (ACS) sample used in this analysis includes individuals who are not enrolled in school at the time of the survey, worked at least one week the previous year, and did not have negative income. Both earnings figures are in 2014 dollars. Base-year earnings actually represent the average of median earnings for individuals age 24 and 25 in the sample. Fifth-year earnings are the average of median earnings figures for individuals age 29 and 30. The reason for combining ages is to ensure most of the cohort has worked for a full year (meaning they have finally exited school and entered the labor force and are beginning to realize gains associated with their field of study). For instance, in the ACS 23–24 age cohort, 66 percent worked for the full year last year; for the ACS 24–25 age cohort, it is 76 percent. In our estimation, the latter provides a better portrayal of early career earnings by undergraduate field of study. For a similar analysis, see Brad Hershbein and Melissa S. Kearney, "Major Decisions: What Graduates Earn over Their Lifetimes—Appendix II," Hamilton Project, September 29, 2014, www.hamiltonproject.org/assets/legacy/files/downloads_and_links/MajorDecisions-TechnicalAppendix2.pdf.

7. For brevity, we include a select number of bachelor's degree fields of study from ACS that most closely correspond to two-digit CIP codes from the Integrated Postsecondary Education Data System. This corresponds to other research, including the Georgetown Center on Education and the Workforce's report *The Economic Value of College Majors,* in which the liberal arts rank 11 of the top 15 majors in terms of median annual earnings for those age 25–59. See Anthony P. Carnevale, Ban Cheah, and Andrew R. Hanson, *The Economic Value of College Majors*, Georgetown University Center on Education and the Workforce, 2015, https://cew-7632.kxcdn.com/wp-content/uploads/The-Economic-Value-of-College-Majors-Full-Report-web-FINAL.pdf.

8. Of course, these findings have exceptions, as they represent median earnings estimates—half of graduates in these fields make more, and half make less. Earnings in majors also vary substantially. Cumulative earnings double—or even triple—when moving from the bottom quarter to the top quarter of earners in a given major. These increases are larger for lower-earning majors. The report lists other important caveats to consider in interpreting the findings around median earnings associated with a field of study. See Brad Hershbein and Melissa S. Kearney, "Major Decisions: What Graduates Earn over Their Lifetimes," Hamilton Project, September 29, 2014, www.hamiltonproject.org/papers/major_decisions_what_graduates_earn_over_their_lifetimes; and Hamilton Project, "Figure 2a: Median Lifetime Earnings, by College Major (Millions of Dollars)," www.hamiltonproject.org/assets/legacy/files/downloads_and_links/MajorDecisions-Figure_2a.pdf.

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10. Humphreys and Kelley, "How Liberal Arts and Sciences Majors Fare in Employment," 1–20.

11. Humanities Indicators, "The State of the Humanities 2018: Graduates in the Workforce & Beyond," American Academy of Arts

and Sciences, 2018, https://www.amacad.org/multimedia/pdfs/publications/researchpapersmonographs/HI_Workforce-2018.pdf.

12. Gallup and Strada Education Network, "Crisis of Confidence: Current College Students Do Not Feel Prepared for the Workforce," 2017, http://news.gallup.com/reports/225161/2017-strada-gallup-college-student-survey.aspx.

13. See also Scott Jaschik, "Humanities Majors Drop," Inside Higher Ed, June 5, 2017, www.insidehighered.com/news/2017/06/05/analysis-finds-significant-drop-humanities-majors-gains-liberal-arts-degrees. Notably, as the article explains, the number of arts and humanities degrees have increased at the community college level.

14. These are numbers of completers who were "first majors" in these fields. See National Center for Education Statistics, Integrated Postsecondary Education Data System, https://nces.ed.gov/ipeds/.

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17. Another argument to consider is whether colleges are also failing in inculcating students with the skills that are considered the fundamentals of the liberal arts. For instance, see Kenneth Kolson and Alexis Zhang, "How Colleges Are Failing Liberal Arts Majors," *Time,* November 2, 2016, http://time.com/money/4549900/liberal-arts-majors-real-problem/; and Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (Chicago, IL: University of Chicago Press, 2011), www.press.uchicago.edu/ucp/books/book/chicago/A/bo10327226.html. We acknowledge that this argument is persuasive and liberal arts programs must examine the extent to which this is the case on their campuses as well.

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20. Some evidence shows that low early-career earnings can weigh down future earnings. See Joseph G. Altonii, Lisa B. Kahn, and Jamin D. Speer, "Cashier or Consultant? Entry Labor Market Conditions, Field of Study, and Career Success," National Bureau of Economic Research, September 2014, www.nber.org/papers/w20531.pdf; and Philip Oreopoulos, Till von Wachter, and Andrew Heisz, "The Short- and Long-Term Career Effects of Graduating in a Recession," *American Economic Journal: Applied Economics* 4, no. 1 (2012): www.aeaweb.org/articles?id=10.1257/app.4.1.1. That earnings for many liberal arts graduates start and continue to be low—as evident in Table 1—suggests the potentially high cost of these choices.

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26. For additional resources on the hybridization of jobs, see General Assembly and Burning Glass Technologies, "Blurring Lines: How Business and Technology Skills Are Merging to Create High Opportunity Hybrid Jobs," 2015, http://burning-glass.com/research/hybrid-jobs/.

27. The importance of skills is not limited only to bachelor's degrees. In a companion paper, we have shown that associate's degree graduates with the right set of skills can earn far more than less-skilled graduates. See Mark Schneider and Matthew Sigelman, "Saving the Associate of Arts Degree: How an A.A. Degree Can Become a Better Path to Labor Market Success," American Enterprise Institute, January 23, 2018, www.aei.org/publication/saving-the-associate-of-arts-degree-how-an-a-a-degree-can-become-a-better-path-to-labor-market-success/. More generally, Schneider and Rooney Columbus show the importance of skills over degrees with respect to post-graduate earnings outcomes. See Mark Schneider and Rooney Columbus, "Degrees of Opportunity: Lessons Learned from State-Level Data on Postsecondary Earnings Outcomes," American Enterprise Institute, October 20, 2017, www.aei.org/publication/degrees-of-opportunity-lessons-learned-from-state-level-data-on-postsecondary-earnings-outcomes/.

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32. Burning Glass Technologies and Oracle Academy, "Beyond Point and Click: The Expanding Demand for Coding Skills," 2016, http://burning-glass.com/research/coding-skills/.

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34. See Launch My Career, "Florida Atlantic University," http://launchmycareerfl.org/schools/133669/majors/23-0101.

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37. Northeastern University, "The Co-op Experience in the Social Sciences and Humanities," www.northeastern.edu/cssh/experiential-learning-2/cooperative-education; and Northeastern University, "Sample Co-op Jobs," www.northeastern.edu/cssh/experiential-learning-2/cooperative-education/students/sample-jobs.

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39. Ashley Delamater, "Redesign Academic Programs to Meet Student Demand: How Susquehanna University Repackaged Their English Program," Education Advisory Board, February 15, 2017, www.eab.com/research-and-insights/academic-affairs-forum/expert-insights/2017/redesign-academic-programs.

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